

# Science Final Revision

## 1 Choose the correct answer:

### Light

1. Light travels (transmits) (propagates) in ..... lines.  
 a curved       b straight       c broken
2. Light traveling in a straight line is the principle ideal of making the .....  
 a radio       b camera       c electric iron       d Opaque
3. ..... materials don't allow light to travel through.  
 a Transparent       b Translucent       c Semi-transparent       d Opaque
4. A sheet of aluminum foil is an example of ..... materials.  
 a Transparent       b Translucent       c Semi-transparent       d Opaque
5. The nearer the object is to the light source, the ..... its shadow.  
 a smaller       b bigger       c fainter
6. The speed of light in air is ..... that in water.  
 a faster than       b slower than       c equal to
7. The change of light direction when it passes from medium to another is called .....  
 a light reflection       b light refraction       c light diffraction
8. The change of light direction when it passes from medium to another is called .....  
 a light reflection       b light refraction       c light diffraction
9. Light ..... when it passes from water to air.  
 a refracts       b reflects       c separates       d scatters
10. Light ..... when it falls on smooth and shiny surfaces.  
 a refracts       b reflects       c separates       d scatters
11. A pencil seems to be broken at water surface due to ..... of light.  
 a reflection       b refraction       c separation       d absorption
12. The prism separates sunlight into ..... colors.  
 a 3       b 5       c 7       d 9

### Seeing colored objects

13. A blue t-shirt seems ..... behind red glass sheet.  
 a blue       b red       c black
14. When you look at a red apple through a yellow glass sheet, the apple seems .....  
 a red       b black       c green       d yellow

15. Red light + Green light + Blue light = .....

a Magenta       b Yellow       c White

16. Black opaque objects ..... all light colors.

a absorbs       b reflects       c transmits       d All of the previous

17. Red, green and blue lights are ..... lights.

a primary       b secondary       c complementary

18. Magenta, cyan and yellow lights are ..... lights.

a primary       b secondary       c complementary

19. Mixing red and blue gives .....

a cyan       b magenta       c yellow

20. Mixing red and blue gives .....

a cyan       b magenta       c yellow

21. Mixing green and blue gives .....

a cyan       b magenta       c yellow

22. Mixing green and blue gives .....

a cyan       b magenta       c yellow

23. Mixing all the primary-colored lights gives ..... color.

a red       b green       c blue       d white

24. As light falls on a banana, the banana absorbs all colors except the ..... color.

a red       b green       c blue       d yellow

## Magnetism

25. The natural magnet was discovered ..... years ago.

a 2000       b 2500       c 3500       d 4000

26. ..... used to locate the main four direction.

a Compass       b Dynamo       c Prism

27. When a magnet is suspended (hanged) freely, the magnet takes ..... direction

a north-south       b east-west       c north-east       d north only

28. When a magnet is suspended (hanged) freely, its north pole refers to the .....

a north       b south       c east       d west

29. When a magnet is suspended (hanged) freely, its north pole refers to the .....

a north       b south       c east       d west

30. The magnet has ..... pole(s).

a 4       b 3       c 2       d 1

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31. Which of the following is a magnetic material?

a Nail  b glass  c paper  d chalk

32. The space around a magnet in which the magnetic force appears is .....

a magnetic pole  b magnetic substance  c magnetic field

33. All of the following materials are not attracted to the magnet except .....

a plastic  b paper  c glass  d nickel

34. The natural magnet is one of the ..... ores.

a copper  b aluminum  c iron

35. Different magnetic poles ..... each other.

a repel  b attract  c intersect

36. ..... is attracted to the magnet.

a Glass  b Cobalt  c Chalk  d Aluminum

## Magnetism and electricity

37. The huge electromagnet is used in .....

a electric bells  b cranes  c telephones

38. ..... scientist who invented the dynamo.

a William Gilbert  b Faraday  c Hertz

39. The dynamo generates ..... energy from mechanical (kinetic) energy.

a thermal  b electrical  c light  d kinetic

40. The coil of a dynamo is made up of .....

a copper  b carbon  c iron

41. Electric energy is converted into magnetic energy in .....

a electromagnet  b dynamo  c electric bell

42. The dynamo is fixed in the bicycle touching the bicycle's .....

a seat  b pedal  c tires

## Mixtures

43. ..... is used to separate a mixture of oil and water.

a Evaporation  b Filtration  
 c Separating funnel  d Magnetic attraction

44. The mixture of iron filings and sand can be separated by .....

a Evaporation  b Filtration  
 c Separating funnel  d Magnetic attraction

45. Solution is a .....

a solid substance  b mixture  c pure substance

## Solutions

46. The most common solvent is .....  
 a) alcohol      b) water      c) benzene

47. The material that dissolves to produce a solution is called .....  
 a) solute      b) solvent      c) mixture

48. The result of solubility process is called .....  
 a) solute      b) solvent      c) solution

49. The speed of solubility increases by .....  
 a) increasing the amount of solvent.      b) increasing the amount of solute.  
 c) decreasing temperature

50. Increasing temperature ..... solubility time.  
 a) increases      b) decreases      c) has no effect

51. Increasing temperature ..... solubility time.  
 a) increases      b) decreases      c) has no effect

52. Increasing temperature ..... solubility time.  
 a) increases      b) decreases      c) has no effect

53. The solute in chocolate-milk solution is the .....  
 a) milk      b) water      c) chocolate

55. The solute in the salty solution is .....  
 a) sugar      b) water      c) salt

54. The solvent in chocolate-milk solution is the .....  
 a) milk      b) water      c) chocolate

56. Water is a common solvent because ..... substances dissolve in it.  
 a) thousands of      b) few      c) no

57. Stirring ..... the speed of the solubility process.  
 a) increases      b) decreases      c) has no effect on

58. Solubility time decreases by increasing .....  
 a) temperature      b) amount of solvent      c) both of them

59. The speed of solubility process ..... by increasing the temperature.  
 a) increases      b) decreases      c) has no effect

60. The most common solvent is .....  
 a) alcohol      b) water      c) benzene

61. All of these factors affect solubility process except .....  
 a) temperature      b) color of solvent      c) stirring  
 d) type of solute

## Environmental Balance unit

62. An example of decomposers (saprophytic organisms) is .....  
**a** fungi      **b** rabbits      **c** cats

63. ..... takes place by some living organisms to hide from their enemies.  
**a** Camouflage      **b** Parasitism      **c** Commensalism

64. Green plants are considered as .....  
**a** decomposers      **b** consumers      **c** producers

65. A water pond is a ..... ecosystem.  
**a** small      **b** large      **c** very large

66. In the food relationship between a man and a bilharzias worm, the man is a .....  
**a** predator      **b** prey      **c** host      **d** parasite

67. The relation between bilharzia worm and man is .....  
**a** mutualism      **b** symbiosis      **c** predation      **d** parasitism

68. The process of photosynthesis is done by a ..... living organism.  
**a** decomposer      **b** consumer      **c** producer

69. The types of parasites are .....  
**a** external      **b** internal      **c** All of the previous

70. The relationship between sponge and tiny aquatic living organisms is .....  
**a** parasitism      **b** predation      **c** commensalism

71. All of the following are external parasites except .....  
**a** lice      **b** ticks      **c** liver worm      **d** lamprey

72. The food relationship between a cat and a rat is an example of .....  
**a** parasitism      **b** predation      **c** symbiosis

73. Bilharzia worm is an ..... parasite.  
**a** external      **b** internal      **c** both

74. The animal that devours another animal is called .....  
**a** parasite      **b** predator      **c** prey

75. Bees looking like wasp is ..... phenomenon.  
**a** camouflage      **b** commensalism      **c** mimicry

76. Mosquito conveys ..... disease to man.  
**a** malaria      **b** plague      **c** cancer      **d** elephantiasis

77. Predation relationship ..... the number of preys in populations.  
**a** increases      **b** decreases      **c** organizes

## 2 Write the scientific term:

1. The main source of light on the Earth.
2. Materials that allow some colored light to pass through them.
3. The seven colors which the white light is made up of.
4. The light energy that can be seen.
5. Phenomenon formed in the sky after rain and sun still shining.
6. Darkened area foamed behind an object once light falls on it.
7. The light that we can get by mixing two of the primary colored lights.
8. Red, green and blue colored lights.
9. Yellow, magenta and cyan colors.
10. The change of light rays directions when they transmit the separate surface between two different transparent media.
11. The light that we can get by mixing two of the primary colored light.
12. Materials that don't allow light to transmit through and objects can't be seen through.
13. The light resulted from mixing of red light and blue light.
14. Materials allow most light to pass through them.
15. A set that is used for locating the main four geographical directions.
16. One of the iron ores which is known as magnetite.
17. A set used to change electric energy into magnetic energy.
18. A device used to convert kinetic energy into electric energy.
19. The materials that are attracted to the magnet.
20. The materials that don't get attracted to the magnet.
21. The magnetic pole which is attracted to the north pole of another magnet.
22. Regions of the magnet, where the magnetic force is most powerful.
23. The force by which the magnet attracts some materials.
24. A substance that consists of more than one type of particles.
25. It is the process by which a solute dissolve in a solvent leading to the disappearance of solute.
26. Mixture which is composed of a solute and a solvent.
27. The substance which dissolves (disappears) in a solvent.

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28. It is the substance in which the solute disappears (dissolves).

29. Substance that consists of only one type of identical particles.

30. A process that is used to separate a solid material dissolved in water.

31. A type of substance in which their components can be separated easily.

32. A method that is used to separate iron filings from sand.

33. Process used to separate the solid materials that are insoluble in water.

34. A process used to separate salt from water.

35. Liquid used to dissolve the solute to make a solution.

36. The mixture results from the solubility of solids in liquid.

37. An apparatus used to separate immiscible liquid mixtures.

38. A set that is used to separate water-oil mixture.

39. It is the food relationship among living organisms in which one living organism devours another one.

40. The harmed organism in parasitism relationship.

41. Kind of plants that devour insects.

42. Any natural area contains living organisms and non-living things.

43. A phenomenon in which living organisms change their color to be hidden from enemies.

44. The temporary food relationship that end by devouring the prey or a part of it.

45. A temporary relationship between two different organisms with a benefit to one and harm to the other.

46. It is the internal parasite which causes bilharzia disease.

47. Food relationship between nodular bacteria and leguminous.

48. The food relationship between two living organisms that benefit from each other.



3

## Give reason for:

1. ★ The image through narrow holes is inverted and minimized.  
★ Formation of shadow when light falls on an opaque body.  
★ The formation of image through narrow holes.  
★ Formation of shadow.

---

2. We see a picture behind the glass clearly.

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3. Light spectrum is formed.

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4. A clear glass sheet is a transparent material.

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4. A raft paper is a translucent material.

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3. Aluminum is an opaque material.

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4. Spoon appears broken in transparent cup filled with water.

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5. When light fall on a white paper, it appears white color.

---

6. The Banana appears yellow when sunlight falls on it.

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7. The red apple seems black when you look at it through a green glass sheet.

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8. We must wear white clothes in summer season.

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9. We wear black clothes in winter.

---

10. Yellow is called a secondary colored light.

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11. Iron is a magnetic material.

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12. Plastic is a non-magnetic material.

13. Compass needle deflects when an electric current passes through a wire near it.

13. Sugar is a pure substance.

14. Air is considered as a mixture.

15. Tomato sauce is a mixture.

16. It is possible to separate iron filings from sand by using magnetic attraction.

17. Water is a common solvent.

18. Drosera is an insectivorous plant.

18. Predation is temporary food relationship.

19. Predation is less common in plant world than in animal world.

20. A butterfly stands on a tree with the similar color.

23. Bilharzia worm is considered a parasite.

21. Parasitism relationship differs from predation relationship.

22. The host's death is considered a loss to the parasite.

**4** Complete each of the following sentences:

1. The object's image formed through narrow holes is ..... and .....
2. The material in which light can transmit through is called .....
3. The spectrum colors start with ..... and end with .....
4. We can see ..... , when sunlight passes through water droplets during rain fall.
5. When light passes from water to air, it ..... because light speed in air is ..... than that through water.
6. Sunlight is separated into ..... colors by passing it through a .....
7. From primary colored lights ....., and from secondary colored lights .....
8. From primary light colors: ..... , ..... and .....
9. Secondary colors are ..... , ..... and .....
10. ..... objects seems having the same color of the light which it reflected.
11. Mixing ..... and ..... lights gives cyan light.
12. Light speed through air is ..... than that through water.
13. The prism separates sunlight into .....
14. The ..... color lies between the green color and the indigo color.
15. On mixing two primary light colors, a ..... light color is produced.
16. The whiteboard ..... all the light colors, while the blackboard ..... the light colors.
17. The ..... magnet is black stone made of iron ores which called .....
18. Like poles ..... each other, whereas unlike poles ..... each other.
19. The substances can be divided into ..... and ..... due to their magnetic ability.
20. The magnetic force is most powerful at the ..... of the magnet.
21. The like poles ..... each other, whereas the ..... poles attract each poles.
22. The ..... contains a small light magnet that moves freely around a fixed axis.
23. The idea of electric generator is change ..... energy into ..... energy.
24. Electromagnet changes ..... energy to ..... energy.
25. The coil of a dynamo is made up of ..... wire.
26. Mixing a small amount of sand with water forming a ..... that can be separated by .....
27. The relationship between sponge and tiny aquatic living organisms is .....
28. The speed of solubility ..... by increasing stirring process.
29. Sand-water mixture can be separated by .....

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30. Solid materials can be mixed by ..... or .....
31. A liquid mixture formed of a solute and a solvent is called .....
32. The Solubility process needs the presence of ..... and .....
33. Increasing ..... decreases solubility time.
34. ..... is a general solvent because of its ability to dissolve most materials.
35. ..... worm causes elephantiasis disease.
36. Mosquito is an ..... parasite, while ascaris worm is an ..... parasite.
37. ..... is any ..... area including living and nonliving organisms.
38. The food relationship between nodular bacteria and bean ..... , whereas the food relationship between fungi and dead bodies is .....
39. Mosquitoes convey ..... disease, while ascaris worm cause ..... disease.
40. The relationship between sponge and tiny aquatic living organisms is .....
41. A butterfly uses ..... as it stands on a tree with a similar color.
42. Green plants are known by ..... organisms.
43. Food relationship in which both organisms benefit from each other is .....
44. Ecosystem may be small as ..... or large as .....

## 5 What happens when?

1. You put an opaque object between a lightened torch and the wall.
2. You look at a street through a translucent window.
3. You look at a lightened candle through three screens with centered holes in one straight line.
4. Yellow light falls on black object.
5. Mixing green and blue lights.
6. You approach a magnet to cobalt and chalk mixture.
7. A magnet is hanged to move freely.

8. You sprinkle some iron filings on a paper sheet which has a strong magnet under it

9. An electric current passes through a coiled wire around wrought iron bar.

10. You put the copper wire which is connected with ammeter (to measure the electric current intensity) between the two poles of magnet.

11. You shake an amount of sugar with water.

12. You heat salty water.

13. Some types of frogs are attacked by enemies.

14. A cuttlefish is attacked by enemies.

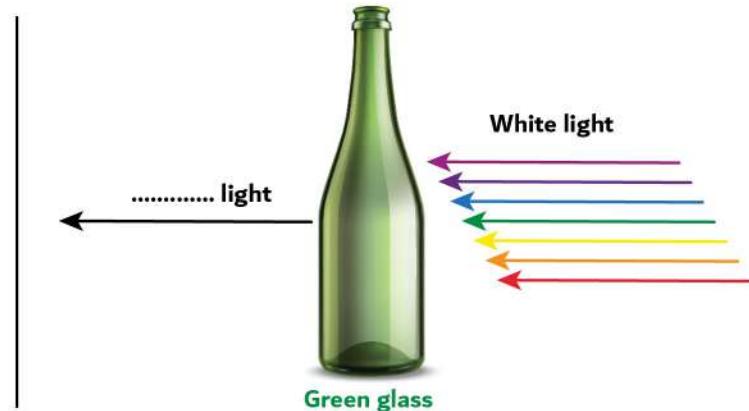
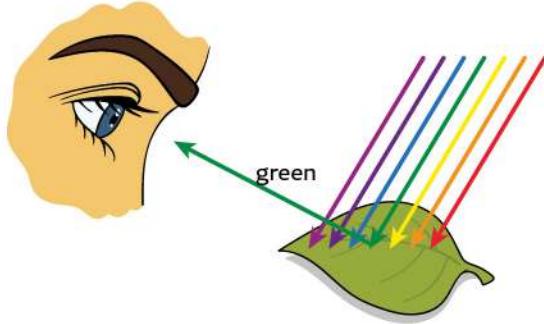
15. There are no nodular bacteria in the roots of leguminous plants as beans.

16. You splash some water drops on a slice of bread, put it in a closed bag and leave it for a few days in the dark.

17. Saprophytes disappear from earth.

## 6 Answer each of the following:

1. What is the color of each object?



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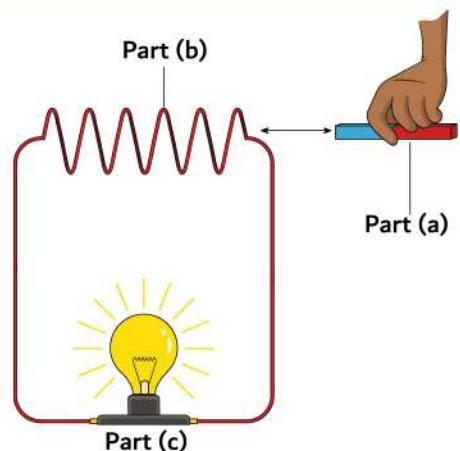
## 2. Look at the opposite figure, then answer the following:

1) Label the figure:

Part (a): ..... Part (b): ..... Part (c): .....

2) The figure represents: .....

3) The apparatus is used to change ..... energy into ..... energy.



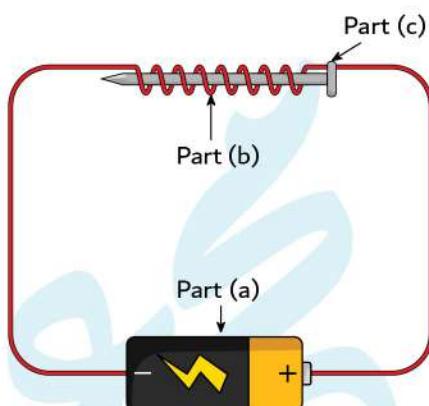
## 3. Look at the opposite figure, then answer the following:

1) Label the figure:

Part (a): ..... Part (b): ..... Part (c): .....

2) The figure represents: .....

3) The apparatus is used to change ..... energy into ..... energy.



## 4. Look at the opposite figure, then answer the following:

1) The opposite figure represents .....

2) The device consists of ..... that can spin freely around a fixed axis.

3) It is used to .....



## 7 How can you separate each of the following mixtures:

1. Chalk and water. ....
2. Sand and water. ....
3. Sand and salt. ....
4. Paper clips and sugar. ....
5. Iron and salt. ....
6. Oil and water. ....
7. Salty solution. ....
8. Sugary solution. ....

## 8 Mention the following:

1. Properties of light.

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2. The difference between regular and irregular reflection.

---

3. The idea of the camera.

---

4. Properties of mixtures.

---

5. The difference between solute and solvent.

---

6. The difference between predator and prey.

---

7. The difference between parasite and host.

---

## 9 Identify the food relation among the following organisms:

1. Sponge and tiny aquatic living organism.

2. Man and liver worm.

3. Leguminous plants and nodular bacteria.

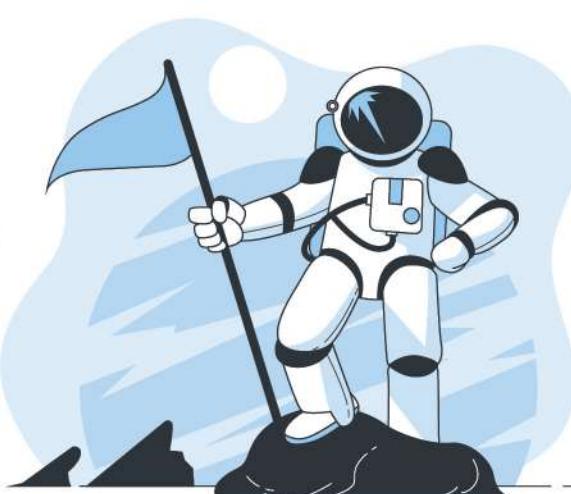
4. A cat and a rat.

5. A lion and a deer.

6. Bread mold fungus.

7. Bilharizia worm and man.

انتهينا بفضل من  
الله و توفيقه ...





# Final Revision

\*(1) **Choose the right answer:**

Mr. Ahmed Elbasha

- 1..... is used to locate the main four directions.  
a. Compass      b. Dynamo      c. Prism
- 2.The blue t-shirt seems ..... behind red glass sheet.  
a. blue      b. red      c. black
- 3.The common solvent is .....  
a. alcohol.      b. water.      c. benzene.
- 4.Red light + Green light + Blue light = .....  
a. Yellow.      b. Magenta.      c. White.
- 5.Increasing temperature ..... solubility time.  
a. increase      b. decreases      c. does not effect
- 6.An example of decomposers is the .....  
a. fungi.      b. rabbits.      c. plants.
- 7.Black opaque object ..... all light colors.  
a. absorbs      b. reflects      c. transmits.      d. all the previous
- 8..... is attracted to the magnet.  
a. Chalk      b. Glass      c. Cobalt      d. Aluminum
- 9.When you look at a red apple from a yellow glass sheet, the apple seems .....  
a. red.      b. blue.      c. black.      d. yellow.
- 10.The solute in chocolate-milk solution is .....  
a. milk.      b. chocolate.      c. water.      d. all the previous.
- 11.Light transmits in ..... lines.  
a. curved      b. broken      c. straight
- 12.The material that dissolves to produce solution is called .....  
a. solvent.      b. solute.      c. mixture.
- 13.The natural magnet is discovered since ..... ago.  
a . 2000      b. 3500      c. 2050

14. .... takes place by some living organisms to hide from their enemies.

a. Camouflage    b. Parasitism    c. Commensalism

---

15. Green plants are considered as ..... organisms.

a. decomposer    b. consumer    c. producer    d. parasitic

---

16. When a magnet is suspended freely, the magnet takes ..... direction.

a. north-south    b. east-west    c. north-east    d. north only

---

17. The dynamo generates ..... energy from mechanical energy.

a. thermal    b. electrical    c. light    d. kinetic

---

18. When a magnet is hanged freely, its north pole refers towards the .....

a. north.    b. south.    c. east.    d. west.

---

19. In food relationship between a man and a bilharzias worm, the man is a .....

a. predator.    b. prey.    c. host.    d. parasite.

---

20. The process of photosynthesis is done by a ..... living organism.

a. producer    b. decomposer    c. consumer    d. all the previous

---

21. .... is used to separate a mixture of oil and water.

a. Evaporation    b. Filtration    c. Separating funnel    d. Magnetic attraction

---

22. Red, green and blue light are ..... lights.

a. primary    b. secondary    c. complementary    d. mix

---

23. .... materials don't allow light to travel through.

a. Transparent    b. Translucent    c. Semi-transparent    d. Opaque

---

24. The space around a magnet in which the magnetic force appears is called .....

a. magnetic pole.    b. magnetic substance.  
c. nonmagnetic substance.    d. magnetic field.

---

25. All these factors affect solubility process except .....

a. temperature.    b. colour of solvent.    c. stirring.    d. type of solute.

---

26. Predation relationship ..... the number of preys in populations.

a. increases    b. organizes    c. decreases    d. prevents

---

27. The coil of a dynamo is made up of .....

a. copper.    b. carbon.    c. iron.

---

28. A material that light cannot transmit through are .....

a. transparent.    b. opaque.    c. semi-transparent

---

29. Magenta, cyan, and yellow light are ..... lights.

a. primary    b. secondary    c. complementary

30.Uses ..... in separation of a mixture of water and oil.

a. evaporation      b. filtration      c. separating funnel

---

31.From examples of saprophytic organisms .....

a. fungi.      b. rabbit.      c. plant.

---

32.The types of parasites are .....

a. external.      b. internal.      c. all the previous.

---

33.The relationship between sponge and tiny aquatic living organisms is .....

a. parasitism.      b. predation.      c. commensalism

---

34.The result from solubility process is called .....

a. solute.      b. solvent.      c. solution.

---

35.The speed of solubility increases by .....

a. increasing the amount of solvent.  
b. increasing the amount of solute.  
c. decreasing temperature.

---

36.Mixing all the primary-colored lights gives .....

a. black light.      b. white light.      c. red light.

---

37.The speed of the solubility process ..... by increasing the temperature.

a. increases      b. decreases      c. doesn't change

---

38.The magnet has ..... poles.

a. 4      b. 3      c. 2

---

39.The nearer object to the light source has the ..... shadow.

a. smaller      b. bigger      c. fainted

---

40.A sheet of aluminum foil is an example for ..... material.

a. transparent      b. opaque      c. translucent      d. all the previous

---

41.Light travels in straight lines this principle is the idea of making .....

a. electric iron.      b. radio.      c. electric heater.      d. camera.

---

42.The speed of light in air is ..... that in water.

a. faster than      b. slower than      c. equal to

---

43.Which of the following is magnetic material ? .....

a. Chalk.      b. Nail.      c. Paper.      d. Glass.

---

44.The dynamo generates ..... energy from mechanical energy.

a. thermal      b. electrical      c. light      d. magnetic

---

45.The process of photosynthesis is done by ..... living organism.

a. consumer      b. producer      c. decomposer      d. saprophyte

---

46. All the following materials are not attracted to the magnet except .....

a. plastic.      b. paper.      c. glass.      d. nickel.

---

47. All the following are external parasites except .....

a. lice.      b. ticks.      c. liver worm.      d. lamprey.

---

48. The solvent in a mixture of chocolate and milk is .....

a. milk.      b. chocolate.      c. water.      d. oil.

---

49. Dinosaurs are extinct animals due to .....

a. pollution.      b. over hunting.      c. change in natural condition.

---

50. The primary colors are red, blue and .....

a. magenta.      b. green.      c. yellow.

---

51. The food relation between cat and rat is an example of .....

a. parasitism.      b. predation.      c. symbiosis.

---

52. The mixture of iron filings and sand can be separated by .....

a. filtration.      b. evaporation.      c. magnetic attraction

---

53. A black opaque object ..... all the light colours.

a. absorbs      b. reflects      c. refracts

---

54. The natural magnet is one of the ..... ores.

a. copper      b. aluminum      c. iron

---

55. The coil of the dynamo is made up of .....

a. plastic.      b. carbon.      c. copper.

---

56. Mixing red and blue gives .....

a. cyan.      b. magenta.      c. yellow.

---

57. Bilharzia worm is an ..... parasite.

a. external      b. internal      c. both

---

58. A water pond is a ..... ecosystem.

a. small      b. large      c. very large

---

59. Solution is a .....

a. mixture.      b. solid.      c. pure substance.

---

60. Which of the following is considered as a secondary color ? .....

a. Yellow.      b. Green.      c. Red.

---

61. The change of light direction when it passes from medium to another is called .....

a. light reflection.      b. light refraction.      c. light direction.

---

62. When you look at red apple through a yellow glass sheet the apple seems .....

a. black.      b. yellow.      c. red.      d. white.

---

63. Light propagates (transmits) in ..... lines.

a. curved      b. straight      c. broken

---

64. Different magnetic poles ..... each other.

a. repels      b. attract      c. intersect      d. do not move far away

---

65. A black opaque object ..... all the spectrum colors.

a. reflects      b. transmits      c. refracts      d. absorbs

---

66. The dynamo is fixed in the bicycle touching the bicycle .....

a. seat.      b. pedal.      c. tire.

---

67. Light ..... when it passes from water to air.

a. refracts      b. reflects      c. separates

---

68. All the following are primary colors except .....

a. blue.      b. green.      c. yellow.

---

69. Kinetic energy is converted into electric energy in .....

a. electromagnet. b. dynamo.      c. electric bell.

---

70. The animal that devouring another animal is called .....

a. parasite.      b. predator.      c. host.

---

71. The coil of dynamo is made up of .....

a. copper.      b. carbon.      c. iron.      d. gold.

---

72. Light ..... when it falls on smooth and shiny surface.

a. separates      b. refracts      c. scatters      d. reflects in one direction

---

73. A pencil seems to be broken at water surface due to ..... of light.

a. reflection      b. refraction      c. separation      d. absorption

---

74. As light falls on a banana, the banana absorbs all colours except the ..... colour.

a. red      b. yellow      c. black      d. green

---

75. The prism separates sunlight into ..... colors.

a. 3      b. 5      c. 7

---

76. Magnet has ..... poles

a. one      b. two      c. three      d. four

---

77. Mixing blue light with red light produce ..... light.

a. cyan      b. yellow      c. magenta

---

78. The speed of light in air is ..... that in water.

a. faster than      b. equal to      c. half

---

79. ..... scientist who create the dynamo.

a. William Gilbert      b. Faraday      c. Al Hassan Bin Al-Haytham

---

80. The huge electromagnet is used in .....

a. electric bell.      b. cranes.      c. telephone.

---

81. The natural magnet is discovered since ..... years ago.

a. 2000      b. 3500      c. 2050

---

82. All the following substances are non-magnetic except .....

a. copper.      b. aluminum.      c. plastic.      d. cobalt.

---

83. All the following colors are primary lights except .....

a. yellow.      b. green.      c. blue.      d. red.

---

84. Mixing green and blue gives .....

a. magenta.      b. yellow.      c. cyan.      d. white.

---

85. The natural magnet is one of the ..... ores.

a. copper      b. aluminum      c. iron      d. carbon

---

86. All the following substances are non-magnetic except .....

a. copper.      b. aluminum.      c. cobalt.      d. plastic.

---

87. Water is a common solvent because ..... of substances dissolve in it.

a. thousands.      b. little      c. few.

---

88. Stirring ..... the speed of the solubility process.

a. decreases      b. increases.      c. doesn't affect

---

89. Solubility time decreases by increasing .....

a. temperature.      b. solvent.      c. both of them.

---

90. The material that dissolves to produce solution is called .....

a. mixture.      b. solvent.      c. solute.

---

91. The solute in the salty solution is .....

a. sugar.      b. salt.      c. water.

---

92. Bilharzia worms are considered as ..... organisms.

a. Producer      b. parasitic      c. decomposer

---

93. Bee looks like wasps undergoes ..... phenomenon.

a. camouflage      b. commensalism      c. mimicry

---

94. Mosquito conveys ..... disease to man.

a. malaria      b. plague      c. cancer      d. elephantiasis

---

95. The relation between bilharzia worm and man is .....

a. mutualism.      b. symbiosis.      c. predation.      d. parasitism.

**\* (2) Write the scientific term :**

- 1) Materials allow some colored light to pass through them. ....
- 2) Any natural area contains living organisms and non-living things. ....
- 3) Food relationship between nodular bacteria and leguminous. ....
- 4) A set used to change electric energy into magnetic energy. ....
- 5) The seven colors which the white light is made up of. ....
- 6) One of the iron ores which is known as magnetite. ....
- 7) It is the substance in which the solute disappears. ....
- 8) It is the food relationship among living organisms in which one living organism devours another one. ....
- 9) The region of the magnet where the magnetic force is the most powerful. ....
- 10) The light energy that can be seen. ....
- 11) Phenomenon formed in the sky after rain and sun still shining. ....
- 12) The substance which dissolves in a solvent. ....
- 13) The food relationship between two living organisms that benefit from each other. ....
- 14) The materials that are attracted to the magnet. ....
- 15) It is the internal parasite which causes bilharzia disease. ....
- 16) Darkened area formed behind an object once light falls on it. ....
- 17) A device used to convert kinetic energy into electric energy. ....
- 18) A tool used to locate the main four directions. ....
- 19) A process used to separate salt from water. ....
- 20) A temporary relationship between two different organisms with a benefit to one and harm to the other. ....
- 21) Mixture which is composed of a solute and a solvent. ....
- 22) The natural area including living organisms and non-living organisms. ....

23) The materials that don't get attracted to the magnet. ....

24) The seven colors of light which sunlight (white light) is made ....

25) The light that we can get by mixing two of the primary colored lights. ....

26) The materials that get attracted to the magnet. ....

27) Yellow, magenta and cyan colors. ....

28) The seven colors of light which sunlight is made up of. ....

29) A tool that is used for locating the four main direction. ....

30) The change of light rays directions when they transmit the separate surface between two different transparent media. ....

31) Liquid used to dissolve the solute to make a solution. ....

32) relationship between two organisms that benefit from each other. ....

33) The light energy that can be seen. ....

34) The mixture results from the solubility of solids in liquid. ....

35) The light that we can get by mixing two of the primary coloured light. ....

36) The temporary food relationship that end by devouring the prey or a part of it. ....

37) regions of the magnet, where the magnetic force is most powerful. ....

38) A substance that consists of more than one type of particles. ....

39) An apparatus used to separate immiscible liquid mixtures. ....

40) A set that is used for locating the main four geographical directions. ....

41) The space around a magnet in which the magnetic force appears. ....

42) A set is used to separate water - oil mixture. ....

43) The light resulted from mixing of red light and blue light. ....

44) The magnetic pole which is attracted to the north pole of another magnet. ....

45) Materials that don't attract to the magnet. ....

46) Materials that don't allow light to transmit through and objects can't be seen through .....  
47) two ends of magnet where the magnetic force is most powerful. ....  
48) The force by which the magnet attracts some materials. ....  
49) Device used to change electric energy to magnetic energy. ....  
50) device used to convert kinetic energy into electric energy. ....  
51) Darkened area formed behind an object once light falls on it. ....  
52) The main source of light on the Earth. ....  
53) Materials allow most light to pass through them. ....  
54) Red, green and blue colored lights. ....  
55) substance that consists of only one type of identical particles. ....  
56) A process that is used to separate a solid material dissolved in water. ....  
57) A type of substance in which their components can be separated easily. ....  
58) A device that is used to separate water-oil mixture. ....  
59) A method that is used to separate iron filings from sand. ....  
60) Process used to separate the solid materials that are insoluble in water. ....  
61) It is the process by which a solute dissolve in a solvent leading to the disappearance of solute. ....  
62) The substance in which solute dissolves. ....  
63) The substance that disappears in the solvent. ....  
64) The balance among the component of the ecosystem. ....  
65) Kind of plants that devour insects. ....  
66) A phenomenon in which living organisms change their color to be hidden from enemies. ....  
67) The harmed organism in parasitism relationship. ....

**\*(3) Complete the following :**

1. The spectrum colors start with ..... and end with .....
2. The idea of electric generator is change ..... energy into ..... energy
3. The relationship between sponge and tiny aquatic living organisms is .....
4. Sand-water mixture can be separated by .....
5. ..... worm causes elephantiasis disease.
6. Yellow, ..... and ..... are known as "secondary light colors .
7. Like poles ..... each other, whereas unlike poles ..... each other.
8. Mosquito is an ..... parasite, while ascaris worm is an ..... parasite.
9. ..... is any ..... area including living and nonliving organisms.
10. When light passes from water to air it ..... because light speed through air is ..... than that through water.
11. Electromagnet changes ..... energy to ..... energy.
12. The substances can be divided into ..... and ..... due to their magnetic ability.
13. White light consists of ..... colors, which are called ..... colors.
14. Solid materials can be mixed by ..... or .....
15. The ..... magnet is black stone made of iron ores which called .....
16. The like poles ..... each other, whereas the ..... poles attract each other.
17. The material in which light can transmit through is called.....
18. The food relationship between cat and rat is .....
19. ..... is a common solvent due to its ability to dissolve several substance.
20. Increasing ..... reduces (decrease) solubility time.
21. Like poles ..... each other.
22. ..... is considered to be a general solvent because of its ability of dissolving most materials
23. When a light ray passes from a glass rod to air, it.....
24. Red light + Green light + Blue light = .....

25. The basic idea of working of the electromagnet is the changing of ..... energy into ..... energy.

26. In salty solution, salt is the ..... while water is the .....

27. Light travels in ..... line.

28. The prism separates sunlight into .....

29. The relationship between ascaris worm and a man is known as .....

30. Secondary colors are ..... , ..... and .....

31. From magnetic material ..... and from non-magnetic material .....

32. From primary colored lights ..... , and from secondary coloured lights. .....

33. The food relationship between nodular bacteria and bean ..... , whereas the food relationship between fungi and dead bodies is .....

34. Sunlight is separated into ..... colors by passing it through a .....

35. The magnetic force is most powerful at the ..... of the magnet.

36. The object's image formed through narrow holes is ..... and .....

37. We can see ..... , when sunlight passes through water droplets during rain fall.

38. The speed of solubility ..... by increasing stirring process.

39. Mosquitoes convey ..... disease, but ascaris worm cause ..... disease.

40. Green light color + blue light color = .....

41. Ecosystem may be small as ..... or large as .....

42. ..... magnet is one of the iron ores that called magnetite.

43. ..... is a transparent material.

44. ..... changes kinetic energy into electric energy.

45. Solvent + Solute (solubility process) = .....

46. Mixing red light color with blue light color forms .....

47. On mixing two primary light colors, a ..... light color is produced.

48. ..... is a non-magnetic material.

49. Red light + blue light = .....

50. The ..... contains a small light magnet moves freely around a fixed axis.

51. From primary light ..... , ..... and .....

52. Mixing ..... and ..... lights gives cyan light.

53. The spectrum colors start with ..... colour and end with ..... colour.

54. Light speed through air is ..... than that through water.

55. The natural magnet is a ..... colored rock.

56. The relationship between sponge and tiny aquatic living organisms is .....

57. The coil of a dynamo is made up of ..... wire.

58. The whiteboard ..... all the light colors, while the blackboard ..... all the light colors.

59. The ..... color lies between the green colour and the indigo colour.

60. Red, ..... and ..... are primary colored lights.

61. Food relationship between bean plant and bacteria is .....

62. The basic idea of the electric generator is the changing of ..... energy into ..... energy

63. Red, green and blue lights are ..... colored lights.

64. A butterfly uses ..... as it stands on a tree with a similar color.

65. Mixing a small amount of sand with water forming a ..... that can be separated by .....

66. The Solubility process needs the presence of ..... and .....

67. .... is the solid substance that dissolves in a solvent.

68. .... is considered as a common solvent.

69. A liquid mixture formed of a solute and a solvent is called .....

70. Green plants are known by ..... organisms.

71. .... objects seems having the same color of the light which it reflected.

72. Food relationship in which both organisms benefit from each other is .....

### \*(4) Correct the underlined words:

1	Ascaris worm is <u>external</u> parasite.	( ..... )
2	<u>Aluminum</u> is a magnetic material.	( ..... )
3	Salt and water are mixed by <u>grinding</u> .	( ..... )
4	Natural magnet is one of the <u>copper</u> ores .	( ..... )
5	<u>Camouflage</u> helps in keeping the environment balance.	( ..... )
6	Yellow light is a <u>primary</u> color.	( ..... )
7	The <u>motor</u> is used in making electric bell.	( ..... )
8	Increasing solvent amount, <u>decreases</u> the speed of solubility.	( ..... )
9	Salt and water are mixed together by stirring or <u>grinding</u> .	( ..... )
10	Separating funnel is used to separate the <u>solid-liquid</u> mixture.	( ..... )
11	Natural magnet is a <u>red</u> rock.	( ..... )
12	Red light + Green light = <u>Cyan</u> light.	( ..... )
13	<u>Mimicry</u> is a phenomenon in which the living organism protects itself from enemies by changing its colour.	( ..... )
14	Solubility speed <u>decreases</u> by shaking and rising the temperature.	( ..... )
15	<u>Parasites</u> get their food by decomposing food remains or dead bodies.	( ..... )
16	The formation of shadow due to traveling light in <u>curved</u> lines.	( ..... )
17	Frog hides from its enemies by <u>mimicry</u> .	( ..... )
18	Disc drive and electric mixer contain <u>dynamo</u> .	( ..... )
19	The object seems black as it <u>reflects</u> all the light colors.	( ..... )
20	Natural magnet is a <u>red</u> rock.	( ..... )
21	Image that formed through pinholes is minimized and <u>erect</u> .	( ..... )

22	Red, green and blue light colours are <b><u>secondary</u></b> light colours.	( ..... )
23	White opaque object <b><u>absorbs</u></b> all light colours falling on it.	( ..... )
24	<b><u>Aluminium</u></b> gets attracted to the magnet.	( ..... )
25	<b><u>Dynamo</u></b> is used to identify the four geographical directions.	( ..... )
26	The magnet has <b><u>three</u></b> poles.	( ..... )
27	Formation of images by using narrow holes are minimized and <b><u>upright</u></b> .	( ..... )
28	<b><u>Refraction</u></b> of light is the bouncing of light rays when light falls on a surface.	( ..... )
29	The visible spectrum consists of <b><u>ten</u></b> colours.	( ..... )
30	Sea water is a <b><u>pure substance</u></b> .	( ..... )
31	<b><u>filter paper</u></b> helps in the separation of oil from water.	( ..... )
32	Solubility speed <b><u>decreases</u></b> by rising the temperature.	( ..... )
33	Increasing solvent amount, <b><u>decreases</u></b> the speed of solubility.	( ..... )
34	By increasing the temperature, the time taken to dissolve solute <b><u>increases</u></b> .	( ..... )
35	Mosquitoes causes infection with <b><u>anaemia</u></b> .	( ..... )
36	Insectivorous plants cannot make <b><u>fats</u></b> .	( ..... )
37	The devoured animal in predation relationship is known as <b><u>predator</u></b> .	( ..... )
38	<b><u>Mimicry</u></b> is a phenomenon in which a living organism can change its colour to simulate the colours of the environment where it lives.	( ..... )
39	<b><u>Parasitism</u></b> is one of the factors that keeps the environmental balanced.	( ..... )
40	The devoured animal is the <b><u>predator</u></b> .	( ..... )
41	Ascaris worms are <b><u>external</u></b> parasites.	( ..... )

**\*(5) Give reason for:**

1. The image through narrow holes is inverted and minimized.

2. Predation is temporary food relationship.

3. Yellow is called secondary colored light.

4. Water is a common solvent.

5. Formation of shadow when light falls on an opaque body.

6. We see a picture behind the glass clearly.

7. When light fall on a white paper, it appears white color.

8. The formation of image through narrow holes.

9. We wear black clothes in winter.

10. A magnet can be used to separate iron fillings from sand.

11. Tape worm is a parasite.

12. An apple appears red when sunlight falls on it.

13. The banana appears yellow when sunlight falls on it.

14. Wood is a non-magnetic material.

15. The red apple seems black when you look at it through a green glass sheet.

16. We must wear white clothes in summer season.

17. Air is considered as a mixture.

18. Formation of shadow.

19. Iron is a magnetic material.

20. Spoon appears broken in transparent cup filled with water.

21. The pen in a cup of water looks broken.

22. Aluminum is an opaque material.

23. It is possible to separate iron filings from sand by using magnetic attraction.

24. Tomato sauce is a mixture.

25. Sugar is a pure substance.

26. Water is a common solvent.

27. Predation is less common in plant world than in animal world.

**\*(6) What happen if:**

1. Mixed a little amount of oil in water.
2. Hanging a bar magnet to move freely.
3. Bacteria disappear from environment.
4. When you look at a spoon placed in glass contains water.
5. When a man infected by filaria worm.
6. On mixing the red light with the green light.
7. Adding an insoluble substance to a certain solvent.
8. On mixing the seven colors.
9. A magnet is hung to move freely.
10. A strong magnet is put close to a piece of wood.
11. Mixing green and blue lights.
12. Looking at red apple through green glass sheet.
13. White light passes through a glass prism.
14. You place your hand between a light source and the wall.
15. Light falls on black opaque object.

16. You look at a picture through a transparent glass sheet.

.....

17. Passing of an electric current in a wire around a rod of soft iron.

.....

18. Moving copper wire between two poles of a magnet.

.....

19. Grinding salt with pepper.

.....

20. Saprophytes disappear completely from the environment.

.....

21. If there are no predators.

.....

Mr.Ahmed ElBasha

**\*(7) Put ( ✓ ) or ( X ) :**

1. Red, green and yellow are primary colors. ( )
2. Bilharzia is example of external parasite. ( )
3. Like magnetic poles repel. ( )
4. By increase temperature solubility time decrease. ( )
5. Yellow banana absorbs the all spectrum colors ( )
6. Insect-eaters plants prey insects to prepare fats. ( )
7. Mixing red, green and blue produce white light. ( )
8. Air is transparent material. ( )
9. The formed image in the mirror due to light refraction . ( )
10. Object's image is formed because light travels in curved lines. ( )
11. When the white light strikes a red rose, it reflects the white colour. ( )
12. A separating funnel is used to separate immiscible liquid mixtures. ( )
13. Green plants are considered as consumer organisms. ( )
14. Solubility decreases by shaking and rising the temperature. ( )
15. Aluminum gets attracted to the magnet. ( )
16. Fruit salad is considered a mixture. ( )
17. Light is a form of energy. ( )
18. Red + Green + Blue= White. ( )
19. We can separate mixture of sand and water by filtration process. ( )
20. The electromagnet consists of copper coil only. ( )
21. The banana fruit seems yellow as it reflects the green light colour. ( )
22. When the white light strikes a red rose, it reflects the white light. ( )
23. The image formed by using narrow holes is maximized and inverted. ( )
24. Blue, green and red lights are the primary coloured lights. ( )

25.Blue, green and red lights are primary coloured lights. ( )

26.As the temperature of a solvent increases the solubility time decreases. ( )

27.Red is the first color in the spectrum colours, but violet is the last colour. ( )

28.Pure substance is the substance that is made of only one type of identical particles. ( )

29.Water, alcohol and benzene are examples for solvents. ( )

30.The moon seems luminous because it reflects the sunlight. ( )

31.The green table reflects all light colours. ( )

32.Aluminium gets attracted to the magnet. ( )

33.Saprophytism causes environmental imbalance. ( )

34.The natural magnet is one of the iron ores (magnetite). ( )

35.A freely suspended magnet always takes the north-south direction. ( )

36.The black opaque objects reflect all light. ( )

37.The dynamo of the bicycle touches the tire. ( )

38.When you look to a red apple through a green glass sheet it seems red. ( )

39.Carton paper is an opaque material. ( )

40.The main light source on the Earth's surface is the moon ( )

41.Light transmits in straight lines. ( )

42.Yellow, magenta and cyan are primary light colors . ( )

43.A glass prism is used to separate white light into four spectrum colors. ( )

44.Air is a transparent material. ( )

45.The electric current has a magnetic effect. ( )

46.Like magnetic poles repel and dislike poles attract. ( )

47.Mixing red, green, and blue colours produce the white colour. ( )

48.Carton is a transparent material. ( )

49.Light refracts when it passes from air to water. ( )

50. Light is a form of energy.	( )
51. The magnet has four poles.	( )
52. The formed image through narrow holes (pinholes) is inverted.	( )
53. The vegetable salad is considered to be a mixture.	( )
54. A mixture of sand and water can be separated by filtration process.	( )
55. The mixture of fruit salad is an example of solid-solid mixtures.	( )
56. Sugar is an example of pure substance.	( )
57. The Solution is a process by which a solute dissolves in solvent.	( )
58. Grinding is a method used to make a solution.	( )
59. Solvent is the substance which dissolves in a solute.	( )
60. Stirring increases the speed of solubility process.	( )
61. Solubility, filtration are ways of mixtures separation.	( )
62. Stirring decreases the speed of solubility process.	( )
63. Water is considered a common solvent.	( )
64. Mud dissolves in water.	( )
65. The balance of ecosystem occurs due to interference of man.	( )
66. Solvent is a liquid used to dissolve the solid material in it.	( )
67. Fungi feeding on the dead organisms bodies are called saprophytes	( )
68. Vegetable salad is considered to be a mixture.	( )
69. Penicillium fungus is a saprophyte.	( )
70. Drosera is an insectivorous plant.	( )
71. Insectivorous plants prey small insects.	( )
72. Ecosystem may be very large like universe.	( )

**\*(8) Show how can separate the following ?**

1. Salt from salty solution. ....
2. Chalk powder from water. ....
3. Oil from oil-water mixture. ....
4. Steel paper clips and flour. ....
5. Sand from water - sand mixture. ....
6. Water and oil solution. ....
7. Sand and iron filings. ....
8. Paper clips and flour ....

**\*(9) What is the function (use) of ... ?**

1. Compass. ....
2. Camouflage for frog. ....
3. Stirring. ....
4. The dynamo. ....
5. Electromagnet ....
6. Glass prism ....
7. Evaporation process ....

**\*(10) Mention the kind of relation between each of the following :**

1. Lion and deer. ....
2. Nodular bacteria and bean plant. ....
3. Mosquitoes and man. ....
4. Fungi and dead organisms ....

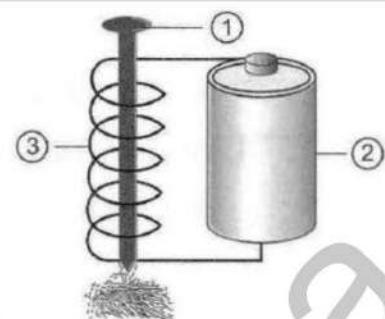
**\*(11) Problems :**

1

Look at the opposite figure then answer :

1. The figure represent .....
2. Label the figure :

- 1) .....
- 2) .....
- 3) .....



2

Complete the table :

Name	The relation	The name of organism
1. Wolf and rabbit	..... (a) .....	The prey is (are) ..... (d) .....
2. Nodular bacteria and bean plant	..... (b) .....	The benefit organism (or organisms) ..... (e) .....
3. Mosquito and man	..... (c) .....	The parasite is (are) ..... (f) .....

3

Choose from column (B), what is suitable it from column (A) :

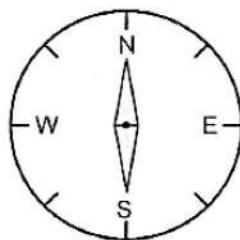
(A)	(B)
1. Bread mold fungi	a. mixtures
2. Salt and sugary solutions	b. appear after rains
3. Tissue paper	c. translucent
4. rainbow	d. saprophytes

1. ....
2. ....
3. ....
4. ....

4

Look at the opposite figure then answer the following :

1. The opposite figure represents .....
2. The device consists of ..... can spin freely around a fixed axis.
3. It is used to .....



5

Choose from column (B) what is suitable it in column (A) :

(A)	(B)
1. Sugar	a. causes malaria disease.
2. Air	b. get by mixing two primary colours.
3. Mushroom fungus	c. is a mixture.
4. Secondary light colours	d. is from saprophytes.
	e. is a pure substance.

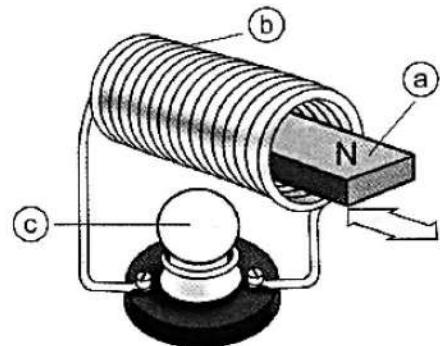
1. .... 2. .... 3. .... 4. ....

6

Look at the opposite figure then answer :

1. The name of the device is .....
2. Label this diagram

(a) ....  
(b) ....  
(c) ....



7

Choose from the column (A) what is suitable it from column (B) :

(A)	(B)
1. A mosquito	a. causes elephantiasis.
2. Flaria worm	b. conveys plague.
3. Bread mold fungus	c. causes malaria.
4. Fleas	d. causes bread mold.

1. .... 2. .... 3. .... 4. ....

8

Choose from column (A) what is suitable it from column (B) :

(A)	(B)
1. Food relation between sponge and tiny aquatic living organisms	a. predation.
2. Food relation between man and liver worm	b. mutualism.
3. Food relation between plant and nodular bacteria	c. internal parasitism.
4. Food relation between a cat and a rat	d. commensalism.

1. ..... 2. ..... 3. ..... 4. .....

9

Identify the type of the food relation among the following organisms using one of these choices : (Predation – Parasitism – Mutualism – Saprophytism)

1. Bilharizia worm and man. ( ..... )  
 2. Lion and deer. ( ..... )  
 3. Nodular bacteria and roots of leguminous plants. ( ..... )  
 4. Bread mold fungus. ( ..... )

10

Look at the opposite figure, and write the Labels :

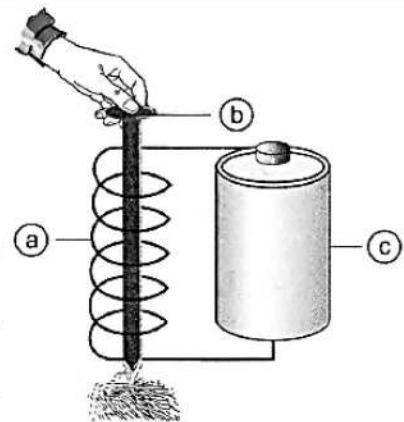
- The name of the device .....

- Label the figure

(a) .....

(b) .....

(c) .....



11

Choose from column (A) what is suitable it from column (B) :

(A)	(B)
1. Glass prism	a. used to separate oil and water mixture.
2. Compass	b. change electric energy into magnetic energy.
3. Electromagnet	c. determine the main four directions.
4. Separating funnel	d. separating white light into seven spectrum colours.

1. ..... 2. ..... 3. ..... 4. .....

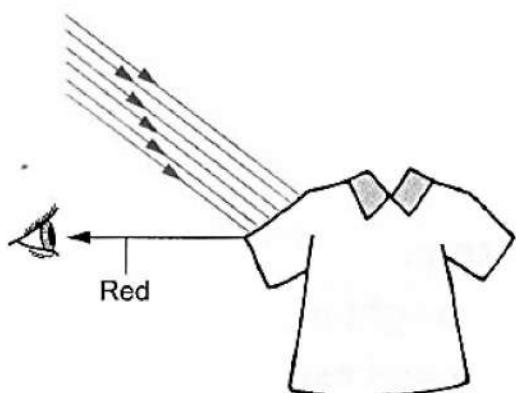
25

Mr.Ahmed ElBasha

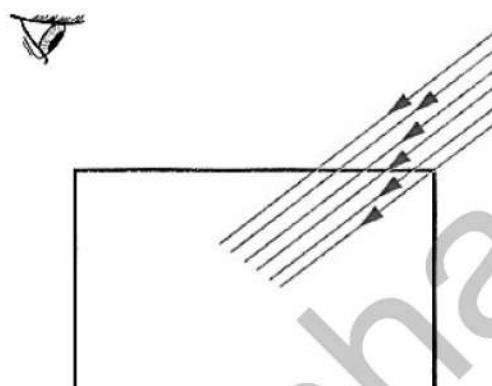
Mob : 01153233911  
Whatsapp : 01003494547

12

What is the colour of the body in each case ... ?



1. ....



2. ....

13

Choose from column (A) what is suitable it from column (B) :

(A)	(B)
1. Salt solution	a. opaque material.
2. Carton	b. travels in straight line.
3. Mushroom fungus	c. reflects light.
4. Light	d. from saprophytes.
	e. mixture.

1. ....

2. ....

3. ....

4. ....

14

[A] Choose the correct answer for the following diagrams, then complete the following sentences :

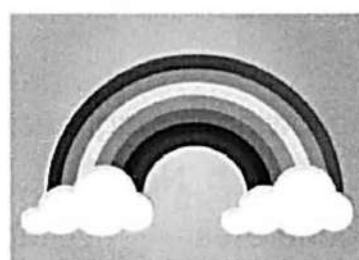
(Light reflection – Rainbow – Light refraction – U shape magnet – Shadow)



a. ....



b. ....



c. ....



d. ....

15

Choose from column (A) what's suitable it from column (B) :

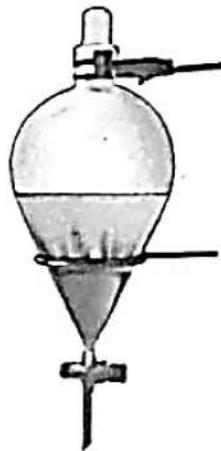
(A)	(B)
1. Jawless lamprey	a. is an internal parasite.
2. Light refraction	b. changes mechanical energy into electric energy.
3. Light reflection	c. is the return back of light when it falls on an object.
4. Electric generator	d. is the change of direction of light ray when it enters a new medium at an angle.
5. Ascaris worm	e. is an external parasite.

1. .... 2. .... 3. .... 4. .... 5. ....

16

Examine the opposite figure, then complete the following :

1. The opposite apparatus is known as .....
2. This apparatus can be used to separate unmixed liquids such as ..... mixture.
3. We can use this apparatus , ..... , ..... or ..... to separate the components of mixtures.



17

Classify the following materials into magnetic and non-magnetic :

Copper - Nickel – Chalk pieces -Aluminium - Paper clips - Glass – Iron

Magnetic materials	Non-magnetic materials

18

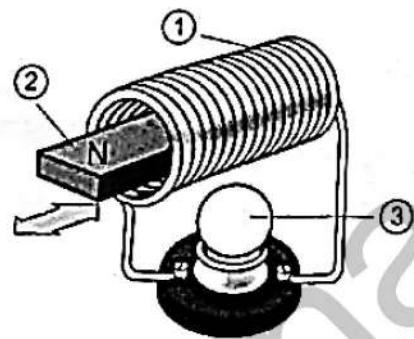
Look at the opposite figure, then answer the following :

1. Label the figure :

① .....

② .....

③ .....



2. The figure represents .....

3. The apparatus is used to change ..... energy into ..... energy.

19

Choose from the column (A) which suitable with column (B) :

(A)	(B)
1. A mosquito	a. causes elephantiasis.
2. Flaria worm	b. conveys plague.
3. Bread mold fungus	c. conveys malaria.
4. Fleas	d. causes bread mold,

1. ....

2. ....

3. ....

4. ....

20

Match from column (A) what suits it from column (B) :

(A)	(B)
1. Mixing blue light with red light produces	a. cyan.
2. Mixing green light with red light produces	b. magenta.
3. Mixing blue light with green light produces	c. white.
	d. yellow.

1. ....

2. ....

3. ....

**Model answer****\*(1) Choose the right answer:**

1. A	20. A	40. B	60. A	80. B
2. C	21. C	41. D	61. B	81. A
3. B	22. A	42. A	62. A	82. D
4. C	23. D	43. B	63. B	83. A
5. B	24. D	44. B	64. B	84. B
6. A	25. B	45. B	65. D	85. C
7. A	26. B	46. D	66. C	86. C
8. C	27. A	47. C	67. A	87. A
9. C	28. B	48. A	68. C	88. B
10. B	29. B	49. C	69. B	89. C
11. C	30. C	50. B	70. B	90. C
12. B	31. A	51. B	71. A	91. B
13. A	32. C	52. C	72. D	92. B
14. A	33. C	53. A	73. B	93. C
15. C	34. C	54. C	74. B	94. A
16. A	35. A	55. C	75. C	95. D
17. B	36. B	56. B	76. B	
18. A	37. A	57. B	77. C	
19. C	38. C	58. A	78. A	
	39. B	59. A	79. B	

**\*(2) Write the scientific term:**

1. Semi-transparent	23. Nonmagnetic material	46. Opaque
2. Ecosystem	24. Spectrum colors	47. Two poles of magnet
3. Mutualism	25. Secondary light colors	48. Magnetic force
4. Electromagnet	26. Magnetic materials	49. Electromagnet
5. Spectrum colors	27. Secondary light colors	50. Dynamo
6. Natural magnet	28. Spectrum colors	51. Shadow
7. Solvent	29. Compass	52. Sun
8. Predation	30. Light Refraction	53. Transparent
9. Two poles of magnet	31. Solvent	54. Primary light colors
10. Visible spectrum	32. Mutualism	55. Pure substance
11. Rainbow	33. Visible spectrum	56. Evaporation
12. Solute	34. Solid – liquid mixture (Solution)	57. Mixture
13. Mutualism	35. Secondary light colors	58. Separating funnel
14. Magnetic material	36. Predation	59. Magnetic attraction
15. Bilharzia worm	37. Two poles of magnet	60. Filtration
16. Shadow	38. Mixture	61. Solubility
17. Dynamo	39. Separating funnel	62. Solvent
18. Compass	40. Compass	63. Solute
19. Evaporation	41. Magnetic field	64. Environmental balance
20. Predation	42. Separating funnel	65. Insectivorous plant
21. Solution	43. Magenta	66. Camouflage
22. Ecosystem	44. South poles	67. Host
	45. Nonmagnetic material	

**\*(3) Complete the following:**

1. Red – violet	24. White	48. Copper
2. Kinetic – electric	25. Electric – magnetic	49. Magenta
3. Commensalism	26. Solute – solvent	50. Compass
4. filtration	27. Straight	51. Red , green and blue
5. filaria	28. Spectrum color	52. Green , blue
6. Cyan and magenta	29. Parasitism	53. Red – violet
7. Repel – attract	30. Cyan , yellow and magenta	54. Faster
8. External - internal	31. Iron – wood	55. Black
9. Ecosystem – natural	32. Red – cyan	56. Commensalism
10. Refract – faster	33. Mutualism – saprophytism	57. Copper
11. Electric – magnetic	34. Seven – glass prism	58. Reflect – absorb
12. Magnetic – nonmagnetic	35. Two poles	59. Blue
13. Seven – spectrum	36. Inverted and minimized	60. Green – blue
14. Shaking – grinding	37. Rainbow	61. Mutualism
15. Natural	38. Increase	62. Kinetic – electric
16. Repel – dislike	39. Malaria – anemia	63. Primary
17. Transparent	40. Cyan	64. Camouflage
18. Predation	41. Pond – desert	65. Mixture – filtration
19. Water	42. Natural	66. Solute – solvent
20. Temperature	43. Glass	67. Solute -
21. Repel	44. Dynamo	68. Water
22. Water	45. Solution	69. Solution
23. Refract	46. Magenta	70. Producer
	47. Secondary	71. Colored opaque object
		72. Mutualism

**\*(4) Correct the underlined words :**

1. Internal	20. Black
2. Iron	21. Inverted
3. Stirring	22. Primary
4. Iron	23. Reflect
5. Predation	24. Iron
6. Secondary	25. Compass
7. Electromagnet	26. Two
8. Increase	27. Inverted
9. Shaking	28. Reflection
10. Oil – water	29. Seven
11. Black	30. Mixture
12. Yellow	31. Separating funnel
13. Camouflage	32. Increase
14. Increase	33. Increase
15. Decomposer	34. Decreases
16. Straight	35. Malaria
17. Camouflage	36. Protein
18. Electromagnet	37. Prey
19. Absorb	38. Camouflage
	39. Predation
	40. Prey
	41. Internal

**\*(5) Give reason for :**

1. Because light travel in straight light
2. Because it ends by devouring the prey or part of it
3. Because it is produced by mixing two primary light colors
4. Because thousands of substance dissolve in water
5. Because light travel in straight light
6. Because it is transparent material
7. Because white paper reflect all light colors fall on it
8. Because light travel in straight light
9. Because it absorb all light colors
10. Because iron filling is magnetic material
11. Because it feeds on host body and get benefit from it while host is harmed
12. Because it absorb all light colors and reflect the red light only
13. Because it absorb all light colors and reflect the yellow light only
14. Because it is not attracted to the magnet
15. Because the reflected red light from apple is absorbed by green glass sheet
16. Because it reflect all light colors fall on it
17. Because it consists of more than one type of particles.
18. Because light travel in straight light
19. Because it is attracted to the magnet
20. Due to light refraction
21. Due to light refraction
22. Because it doesn't allow light to pass through it
23. Because iron filling is magnetic material
24. Because it consists of more than one type of particles.
25. Because it consist of only on type of identical particles
26. Because thousands of substance dissolve in water
27. Because the plants can make their food by photosynthesis.

**\*(6) What happen if :**

1. It will make liquid – liquid mixture
2. It will take north – south direction
3. The earth will be covered by wastes, dead bodies and food remains.
4. It seems Brocken
5. will affected by Elephantiasis
6. Yellow light is produced
7. It doesn't dissolve in solvent
8. It will produce white light
9. It will take north – south direction
10. Piece of wood not attracted to magnet
11. Cyan light is produced
12. Yellow light is produced
13. White light separated into seven spectrum colors
14. Shadow is formed
15. It will absorb all light colors
16. I can see it clearly.
17. It will make electromagnet
18. It will form dynamo and electric energy is produced
19. It will form solid – solid mixture
20. The earth will be covered by wastes, dead bodies and food remains.
21. The number of preys increases

**\*(7) Put ( ✓ ) or ( X ) :**

1. ( X )	16. ( ✓ )	30. ( ✓ )	45. ( ✓ )	59. ( X )
2. ( X )	17. ( ✓ )	31. ( X )	46. ( ✓ )	60. ( ✓ )
3. ( ✓ )	18. ( ✓ )	32. ( X )	47. ( ✓ )	61. ( X )
4. ( ✓ )	19. ( ✓ )	33. ( X )	48. ( X )	62. ( X )
5. ( X )	20. ( X )	34. ( ✓ )	49. ( ✓ )	63. ( ✓ )
6. ( X )	21. ( X )	35. ( ✓ )	50. ( ✓ )	64. ( X )
7. ( ✓ )	22. ( X )	36. ( X )	51. ( X )	65. ( X )
8. ( ✓ )	23. ( X )	37. ( ✓ )	52. ( ✓ )	66. ( ✓ )
9. ( X )	24. ( X )	38. ( X )	53. ( ✓ )	67. ( ✓ )
10. ( X )	25. ( ✓ )	39. ( ✓ )	54. ( ✓ )	68. ( ✓ )
11. ( X )	26. ( ✓ )	40. ( X )	55. ( ✓ )	69. ( ✓ )
12. ( ✓ )	27. ( ✓ )	41. ( ✓ )	56. ( ✓ )	70. ( ✓ )
13. ( X )	28. ( ✓ )	42. ( X )	57. ( ✓ )	71. ( ✓ )
14. ( X )	29. ( ✓ )	43. ( X )	58. ( X )	72. ( ✓ )
15. ( X )		44. ( ✓ )		

**\*(8) Show how can separate the following ?**

1. evaporation
2. filtration
3. separating funnel
4. magnetic attraction
5. filtration
6. separating funnel
7. magnetic attraction
8. magnetic attraction

**\*(9) What is the function (use) of ... ?**

1. to locate main four geographic direction
2. to hidden from enemies
3. to make mixture
4. to convert mechanical energy to electric energy
5. to convert electric energy to magnetic energy
6. to separate white light into seven spectrum colors
7. to separate solid – liquid mixture that soluble in water

**\*(10) Mention the kind of relation between each of the following :**

1. predation
2. mutualism
3. parasitism
4. saprophytism

**\*(11) Problems :****(1) -**

1 - Electromagnet  
 2 - 1. Iron nail  
 2. battery  
 3. copper wire

**(2) -**

A - Predation	B - mutualism	C- parasitism
D- rabbit	E - both of them	F - mosquito

**(3) -**

1 - d	2 - a	3- c	4- b
-------	-------	------	------

**(4) -**

1 - compass  
 2 - magnetic needle  
 3- locate main four geographic direction

**(5) -**

1 - e	2 - c	3- d	4- b
-------	-------	------	------

**(6) -**

1 - Dynamo  
 2 - a. Magnet  
 b. copper coil  
 c. lamp

**(7) -**

1 - c	2 - a	3- d	4- b
-------	-------	------	------

**(8) -**

1 - d	2 - c	3- b	4- a
-------	-------	------	------

**(9) -**

1 - parasitism  
 2 - predation  
 3- mutualism  
 4- saprophytism

**(10) -**

1 - Electromagnet  
 2 - 1. Copper wire  
 2. iron nail  
 3. battery

**(11) -**

1 - d	2 - c	3- b	4- a
-------	-------	------	------

**(12) -**

1 - Red  
 2 - Black

**(13) -**

1 - e	2 - a	3- d	4- b
-------	-------	------	------

**(14) -**

A - Shadow      B – Light refraction      C- rainbow    D- U-shaped magnet

**(15) -**

1 - e      2 - d      3- c      4- b      5- a

**(16) -**1 – Separating funnel  
2 – oil – water  
3- magnetic attraction , filtration or evaporation**(17) -**

Magnetic materials	Non-magnetic materials
Nickel Paper clip Iron	Copper Chalk pieces Aluminum Glass

**(18) -**1 – 1. Copper Coil  
2. magnet  
3. lamp  
2 - Dynamo  
3 - kinetic – electric**(19) -**

1 - c      2 - a      3- d      4- b

**(20) -**

1 - b      2 - d      3- a

# Complete

- 1- Like magnetic poles ..... Whereas dislike poles .....
- 2- Electric generator (dynamo) change ..... into .....
- 3- Bilharzia worm is named ..... While man called .....
- 4- Material in which most light can pass through is called .....
- 5- The magnetic pole that refers to north direction is called .....
- 6- The interaction between cat and rat is example of ..... relationship
- 7- The relation between honey bees and flowers is ..... relationship
- 8- The current produced by (dynamo) increase by ..... and .....
- 9- We can separate a mixture of paper clips and flour by .....
- 10- The ecosystem is ..... area contains ..... and .....
- 11- There are two types of commensalism are ..... and .....
- 12- Most light can transmit through ..... materials
- 13- The magnetic force is most powerful (concentrated) at .....
- 14..... is considered a general (common) solvent .
- 15- Prism separate white light into .....
- 16- The ..... Is the space around magnet in which magnetic force appear
- 17- Mixing ..... and ..... produce magenta light .
- 18- When current pass in a coil around iron nail, the nail becomes .....
- 19- ..... and ..... are from the shapes of artificial magnet
- 20- ..... materials allow some light to pass through, but ..... materials don't allow light to pass through
- 21- Nodular bacteria benefit from bean plant by getting ..... While plant get ..... from it .

22- Shadow is ..... area, formed because light travel in .....

23- ..... and..... are types of light reflection

24- Flaria worm causes ..... disease, while mosquitoes infect man with ..... disease .

25- Mixtures can be formed by ..... or .....

26- The light reflection on a plane mirror (smooth surface) is called .....

27-The light reflection on a white paper (rough surface ) is called .....

28- Substance are made only of one type of particles is called .....

29- Substance are made of different type of particles is called .....

30- Many living organisms defend themselves against enemies as

..... and .....

31.....has small light magnet moves freely on axis .

32- Light can't transmit through ..... materials

33- Magnetic force of electromagnet increase by ..... or .....

34- The relation between mosquitoes and man is .....

35- Light can transmit through .....and ..... materials

36- .....and.....increase solubility speed

37- .....and.....decrease solubility time

38- The travelers in desert use a .....

39- .....and..... are methods of separating mixtures

40- ..... and ..... are ways of self-defense against predation

41- ..... and ..... are magnetic materials..... and..... are non-magnetic

42- The main source of light on Earth surface is .....

43- Fungi are from.....organisms

44-.... and ... are primary colors, .....and .....are secondary colors

45- Solution is a ..... mixture, consists of .....and .....

46- The moon seems luminous, because it ..... sunlight

47- Natural magnet is a ..... color, it known by .....

48- Electromagnet change ..... energy into ..... energy

49- Light is a form of .....

50- A set change mechanical energy into electric energy is .....

51- ..... and ..... are examples of insect eaters' plants

52- Red apple appear .... From a red glass, but appear ..... From green one

53- The image formed through narrow holes is ..... and .....

54- The sun is the source of ..... and .....

55.....is example of mixtures

56- Table salt is produced by ..... of sea water

57- The electric current has..... effect

58- Spectrum colors start with .....color and end with ..... color .

## **Write scientific term :**

1- Darkened area formed when light falls on an opaque object .( )

2- It is the light energy that can be seen . .( )

3- A parasitic worm cause bilharzias is disease .. ( )

4- The materials through which light can't transmit . . ( )

5- The change in the direction of light when it pass from a transparent medium to another transparent medium .. ( )

6- Red, orange, yellow, green, blue, indigo and violet . .( )

7- A disease caused by parasitic ascaris worm . .( )

8- The temporary food relationship that end by devouring the prey .( )

9- A set that is used for locating the main four directions . .( )

10- The substance that is made of only one type of particles . .( )

11- A method used to separate a soluble solid material from water . .( )

12- The food relationship between insects as bees and flowers of plants .

13- An area where, magnetic force is powerful . . ( )

14- Natural area including living organism and non-living things . .( )

15- An organism changes its color to simulate the color of the organism (

16- A temporary food relationship, in which an organism predares the other ( )

17- The space around a magnet in which the magnetic force appear ( )

18- The seven colors which are mixed to form the white light . ( )

19- A set used to change the mechanical energy into electric energy .(

20- A mixture formed by adding an amount of sugar to water with stirring(

21- A set that is used to separate water-oil mixture . ( )

22- A food relationship in which one organism benefit, while the other ( )  
neither gets benefit nor is harmed . ( )

---

---

23- Materials cannot be attracted to the magnet . ( )

---

---

24- Living organisms feed on dead bodies . ( )

---

---

25- The material which lets most light pass through ( )

---

---

26- The materials that get attracted to the magnet . ( )

---

---

27- The pouncing of light when it falls on a smooth surface . ( )

---

---

28- A phenomenon occurs in the sky after raining during a sunny day( )

---

---

29- A reflection of light on a smooth and shiny reflected surface .( )

---

---

30- A material, where the light doesn't transmit through it .( )

---

---

31- The balance among the components of the ecosystem .( )

---

---

32- A substance that contains more than one type of particles .( )

---

---

33- A relation between two living organisms, where they benefit from each other ( )

---

---

34- A food relationship between a cat and a rat . ( )

---

---

35- The materials which you can see objects clearly behind them .( )

---

---

36- The phenomenon in which a living organism can change its color to simulate the color of the environment . ( )

---

37- A device which is used to convert the electric energy into magnetic energy ( )

---

38- They are colored that are produced by mixing two of the primary colored lights. ( )

---

39- Reflection of light on the surface of white paper in different directions .( )

---

40- The area of the magnet, where the magnetic force is most powerful .( )

---

41- A parasite which causes elephantiasis to man . ( )

---

42- The reflection of light rays when they fall on a mirror . ( )

---

43- A mixture formed by mixing vinegar and water . ( )

---

44- One of iron ores which is known as magnetite . ( )

---

45- A temporary relationship between two organisms with a benefit to one and a harm to the other .( )

---

46- A method used to separate a mixture of sand solution . ( )

---

47- A process by which a solute dissolves in a solvent . ( )

---

48- A food relationship between two organisms, one is benefit and the other is harmed.( )

---

# **What happen**

---

1- Heating salty solution gently ?

---

2- Adding an amount of sugar to water with stirring ?

---

3- Dissolving an amount of salt in hot water ?

---

4- Passing white light through a glass prism ?

---

5- Moving a wire between two poles of a magnet ?

---

6- Decomposer, saprophytic , bacteria disappear ?

---

7- You put north pole of a magnet close to north pole of another magnet ?

---

8- You suspend a magnet to move freely ?

---

9- Dissolving carbon dioxide gas in sugary solution ?

---

10- An electric current passes through a twisted wire around a wrought iron?

---

11- Green light strikes a black object ?

---

12- Mixing red light with green light ?

---

13- You look at a spoon in a glass of water ?

---

14- Heating salty water for along time ?

---

15- A mosquitoes stands on the skin of the human body ?

---

16- A cuttlefish attacked by predators ?

17- Mixing red light with blue light ?

---

18- Mixing green light with blue light ?

---

19- Seven spectrum colors are mixed together ?

## **Give Reason**

1- A mixture of sand and iron filings can be separated easily ?

.....

2- The magnet attracts iron, but it does not attract copper ?

.....

3- The chalk appears white, while the board appears black ?

.....

4- The rainbow appears in the sky after heavy rainfall ?

.....

5- Chameleon simulate the color of the surrounding environment ?

.....

6- Seeing the spoon bending = broken in a cup of water ?

.....

7- Some bees look like wasps in forming lines on their bodies ?

.....

8- Copper is a non-magnetic material ?

.....

9- Decomposers are important for the nature ?

.....

10- The compass is an important tool for travelers ?

.....

11- The formation of inverted image through narrow holes ?

.....

12- The green glass window seems green ?

.....

13- Magenta is called a secondary colored light ?

.....

14- Object's shadow is formed ?

.....

15- Moon seems luminous ?

.....

16- Predation is a temporary food relationship ?

.....

17- The formation of spectrum colors ?

.....

18- Some harmless living organisms imitate other living organisms ?

.....

19- Aluminum foil is an opaque material ?

.....

20- Mineral water is considered a mixture ?

.....

21- We can see objects clearly behind a glass sheet ?

.....

22- Green plants are self feeding = autotrophic organism ?

.....

23- Tape worm is a parasite ?

.....

24- A tissue paper is semi-transparent material ?

.....

25- The electromagnet is very important ?

.....

26- Some plants are known as insectivorous plants ?

.....

27- The presence of battery in the electromagnet is important ?

.....

28- Saprophytic organisms are decomposers ?

.....

29- We see the white object as it is ?

.....

30- Dissolving 50 gm. of sugar in one liter of water is faster than in half liter of water ?

.....

# **Mention one function ?**

**Prism :**

.....

**Compass :**

.....

**Dynamo :**

.....

**Electromagnet :**

.....

.....

**Laser light :**

.....

## **Give one Example for :**

**Predation:** .....

---

**Mutualism:** .....

---

**Commensalism:** .....

---

**External parasites:** .....

---

**Internal parasites :** .....

**Mimicry:** .....

---

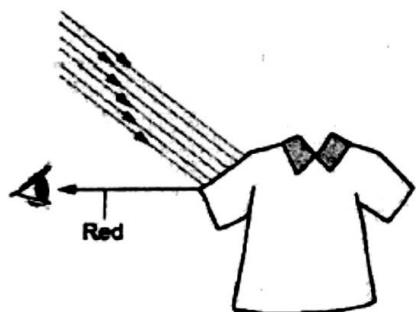
**Camouflage:** .....

---

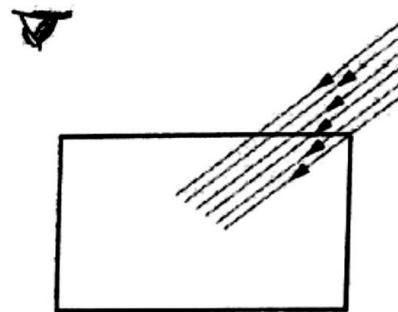
**Saprophytes:**.....

## **Problems :**

**[B] What is the colour of the body in each case ... ?**

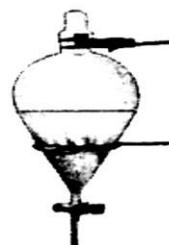


1. ....



2. ....

**[B] Study the following figures, then :**

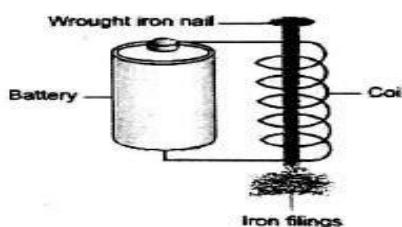


**Figure (A)**

- The figure represents the

- Function .....

**Study the following figures, then :**



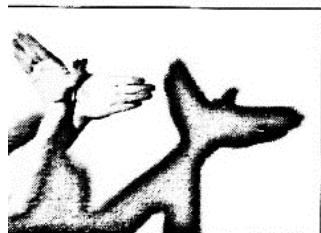
**Figure (B)**

- The figure represents the .....

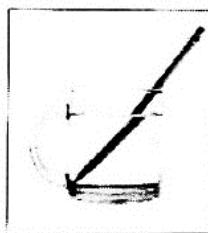
- Function .....

[A] Choose the correct answer for the following diagrams, then complete the following sentences :

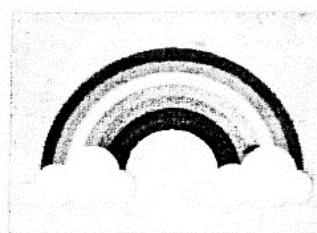
(Light reflection – Rainbow – Light refraction – U shape magnet – Shadow)



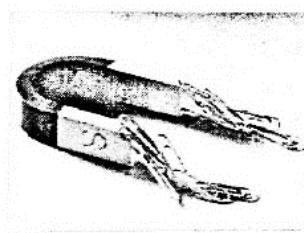
a. ....



b. ....



c. ....



d. ....

Look at the opposite figure then answer :

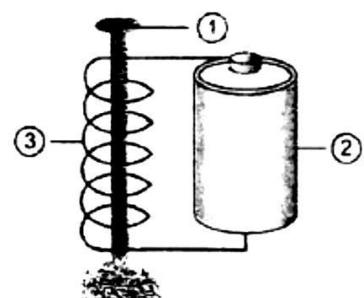
1. The figure represent .....

2. Label the figure :

① .....

② .....

③ .....



# Model answer

## Complete

10- Like magnetic p **Repel** ..... whereas dislike p **Attract** .....

11- Electric generator (dynamo) cha **kinetic** ..... **electric** .....

12- Bilharzia worm is name **parasit** ..... While man ca **Host** .....

13- Material in which most light can pass through is ca **transparent**

14- The magnetic pole that refers to north direction is ca **North pole**

15- The interaction between cat and rat is **predation** of ..... relationship

16- The relation between honey bee and flowers is ..... relationship

17- The electric current produced by electric generator (dynamo) increase by **.....Increase the number of turns** or **.....Increase the motion of coil**

18- We can separate a mixture of paper clips and flo **magnet** .....

10- The ecosystem is **natural** area contains **Living** ... and **Nonliving**

11- food relationship between sponge and tiny aquatic organisms is **commensalism**

12- Most light can transmit through **transparent** ... materials

13- The magnetic force is most powerful (concentrated) at **The two poles**

14- **water** ... is considered a general (common) solvent .

15- Prism separate white light into **Seven colours**

16- The **Magnetic field** Is the space surrounding magnet in which magnetic force appear .

17- Mixing **red** ... and **blue** . produce magenta light .

18- When electric current pass in a coil around iron nail, the nail becomes **magnet** .....

19- ...**bar** magnet. and **horse shoe**. are from the shapes of artificial magnet

20- **semi transparent** materials allow some light to pass through, but **Opaque** materials don't allow light to pass through

21- Nodular bacteria benefit from bean plant by getting **food**

While plant get ...**nitrogen**... from it .

22- Shadow is **dark** area, formed because light travel in **straight lines**

23- **regular** and **irregular** are types of light reflection

24- Flaria worm causes **elephantiasis** disease, while mosquitoes infect man with **malaria** disease .

25- Mixtures can be formed by **stirring** or **shaking**

26- The light reflection on a plane mirror (smooth surface) is called **regular**

27-The light reflection on a white paper (rough surface ) is called **irregular**

28- Substance are made only of one type of particles is called **pure substance**

29- Substance are made of different type of particles is called **mixture**

30- Many living organisms defend themselves against enemies as  
**Chameleon( frog ) and bee**

31- **small dynamo** has small light magnet moves freely on axis .

32- Light can't transmit through **opaque** materials

33- Magnetic force of electromagnet increase by **increase batteries** or **increase number of turns**

34- The relation between mosquitoes and man is **parasitism**

35- Light can transmit through **transparent** and **semitransparent** materials

36- **heating** and **stirring** increase solubility speed

37- **heating** and **stirring** decrease solubility time

38- The travelers in desert use a **compass**

39- **filtration and evaporation** are methods of separating mixtures

40- **camouflage** and **mimicry** are ways of self-defense against predation

41- **iron** and **nickel** are magnetic materials

**wood** and **plastic** are non-magnetic materials

42- The main source of light on Earth surface is **sun**

43- Fungi are from **saprophytes** organisms

44- red and blue are primary colors magenta and yellow are secondary colors

45- Solution is a homogenous mixture, consists of solvent and solute

46- The moon seems luminous, because it reflect sunlight

47- Natural magnet is a black color, it known by magnetite

48- Electromagnet change electric energy into magnetic energy

49- Light is a form of energy

50- A set change mechanical energy into electric energy is dynamo

51- halophila and Dionaea are examples of insect eaters plants

52- Red apple appear red From a red glass, but appear black from a green glass .

53- The image formed through narrow holes is inverted and small

54- The sun is the source of heat and light

55- salty water is example of mixtures

56- Table salt is produced by evaporation of sea water

57- The electric current has magnetic effect

58- Spectrum colors start with red color and end with violet color .

## **Write scientific term :**

- 10- Darkened area formed when light falls on an opaque object  
**shadow**
- 11- It is the light energy that can be seen .**visible spectrum**
- 12- A parasitic worm cause bilharzias is disease .**bilharzia worm**
- 13- The materials through which light can't transmit .**opaque**
- 14- The change in the direction of light when it pass from a transparent medium to another transparent medium .**light refraction**
- 15- Red, orange, yellow, green, blue, indigo and violet .**spectrum colors**
- 16- A disease caused by parasitic ascaris worm .**anaemia**
- 17- The temporary food relationship that end by devouring the prey  
**predation**
- 18- A set that is used for locating the main four directions .**compass**
- 10- The substance that is made of only one type of particles .**pure substance**
- 11- A method used to separate a soluble solid material from water  
**evaporation**
- 12- The food relationship between insects as bees and flowers of plants .**mutualism**
- 13- An area where, magnetic force is powerful .**magnetic field**
- 14- Natural area including living organism and non-living things .**ecosystem**
- 15- An organism changes its color to simulate the color of the environment .**chameleon**
- 16- A temporary food relationship, in which an organism predares the

other .**predation**

17- The space around a magnet in which the magnetic force appear .**magnetic field**

18- The seven colors which are mixed to form the white light .**spectrum colors**

19- A set used to change the mechanical energy into electric energy .**dynamo**

20- A mixture formed by adding an amount of sugar to water with stirring .**homogenous mixture**

21- A set that is used to separate water-oil mixture .**separating funnel**

22- A food relationship in which one organism benefit, while the other neither gets benefit nor is harmed . **commensalism**

23- Materials cannot be attracted to the magnet . **non-magnetic**

24- Living organisms feed on dead bodies . **saprophytes**

25- The material which lets most light pass through and objects can be seen clearly through it . **transparent**

26- The materials that get attracted to the magnet .**magnetic material**

27- The bouncing of light when it falls on a smooth surface .**light reflection**

28- A phenomenon occurs in the sky after raining during a sunny day .**rainbow**

29- A reflection of light on a smooth and shiny reflected surface .**regular reflection**

30- A material, where the light doesn't transmit through it .**opaque**

31- The balance among the components of the ecosystem .**environmental balance**

32- A substance that contains more than one type of particles .**mixture**

33- A relation between two living organisms, where they benefit from each other . **mutualisms**

34- A food relationship between a cat and a rat . **predation**

35- The materials which you can see objects clearly behind them .**transparent**

36- The phenomenon in which a living organism can change its color to simulate the color of the environment . **camouflage**

37- A device which is used to convert the electric energy into magnetic

energy . **electromagnet**

38- They are colored that are produced by mixing two of the primary colored lights. **secondary colors**

39- Reflection of light on the surface of white paper in different directions .**irregular reflection**

40- The area of the magnet, where the magnetic force is most powerful .**magnetic field**

41- A parasite which causes elephantiasis to man . **filaria**

42- The reflection of light rays when they fall on a mirror .**regular reflection**

43- A mixture formed by mixing vinegar and water .**homogenous**

44- One of iron ores which is known as magnetite .**natural magnet**

45- A temporary relationship between two organisms with a benefit to one and a harm to the other .**parasitism**

46- A method used to separate a mixture of sand solution .**filtration**

47- A process by which a solute dissolves in a solvent .**solubility**

48- A food relationship between two organisms, one is benefit and the other is harmed .**parasitism**

# **Correct**

1- Mosquitoes infect man with small pox disease . **malaria**

2- Saprophytism takes place between insects and flower .**mutualism**

3- Bilharzia and ascaris are external parasite **internal**

4- Magnetic force is concentrated at the middle of the magnet. **two poles**

5- Insectivorous plants obtain protein from photosynthesisprocess. **insect eating**

6- The relation between insects and flowers is symbiosis. **mutualism**

7- The bread mold fungus is a predator. **Saprophyte**

8- The opaque materials allow most light to pass through. **Transparent**

9- A beam of light is refracted when it fall on a plane mirror. **Reflected**

10- Commensalism ends by killing or devours one organism. **predation**

11- If you look at banana through green glass, it seems yellow. **Black**

12- Solubility speed decrease by shaking and temperature . **increase**

13- The electromagnet change kinetic energy into electric energy . **dynamo**

14- Magnetite is an artificial magnet . **natural**

15- We use evaporation to separate mixture contain precipitate. **Filtration**

16- The materials that attracted to magnet is electric material. **Magnetic**

17- The lowest magnetic force is concentrated at two poles. most

18- Visible spectrum is made of six colors. Seven

19- Spiders infect man with malaria . mosquito

20- The motor use to identify the main four directions. Compass

21- Fungi that feed on dead bodies is parasitism. . **saprophyte**

22- Parasite organize the number of preys. **Predation**

23- Natural magnet is one of iron ores known as cobalt. **Magnetite**

24- A mixture of sand and iron can be separated by evaporation. **magnet**

25- Cyan is produced from mixing red and green colored lights. **yellow**

26- Mixture of sugar and water is a heterogeneous. **homogeneous**

27- Aluminum gets attracted to magnet . **iron**

# **What happen**

- 10- Heating salty solution gently ?  
**Water evaporate, and salt remain**
- 11- Adding an amount of sugar to water with stirring ?  
**Sugar will dissolve in water**
- 12- Dissolving an amount of salt in hot water ?  
**A homogenous mixture is formed**
- 13- Passing white light through a glass prism ?  
**It will be split into seven colors**
- 14- Moving a wire between two poles of a magnet ?  
**An electric current produce**
  
- 15- Decomposer, saprophytic , bacteria disappear ?  
**The bodies of dead animals spread on earth surface**
- 16- You put north pole of a magnet close to north pole of another magnet ?  
**The will repel each other**
- 17- You suspend a magnet to move freely ?  
**It take a fixed directions north and south directions**
- 18- Heating a participated مترسب sugary solution ?  
**The participated sugar will be dissolved**
  
- 10- An electric current passes through a twisted wire around a wrought iron bar ?  
**the wrought iron will change into magnet**
- 11- Green light strikes a black object ?  
**The black object absorbs the green light**
- 12- Mixing red light with green light ?  
**Yellow light is formed**
- 13- You look at a spoon in a glass of water ?

It appears broken

14- Heating salty water for along time ?

Water evaporate and salt remain

15- A mosquitoes stands on the skin of the human body ?

It may causes malaria disease

16- A cuttlefish attacked by predators ?

Will eject a black fluid to hide

17- Mixing red light with blue light ?

Magenta light is formed

18- Mixing green light with blue light ?

A cyan light is formed

19- Seven spectrum colors are mixed together ?

White color is formed

## **Give Reason**

10- A mixture of sand and iron filings can be separated easily ?

Because it can be separated by magnet

11- The magnet attracts iron, but it does not attract copper ?

Because iron is magnetic substance while copper non-magnetic

12- The chalk appears white, while the board appears black ?

Because white reflect all colors while black absorb all colors

13- The rainbow appears in the sky after heavy rainfall ?

Due to the refraction of light in water drops of rain

14- Chameleon simulate the color of the surrounding environment ?

To hide from enemies

15- Seeing the spoon bending = broken in a cup of water ?

Due to light refraction

16- Some bees look like wasps in forming lines on their bodies ?

Because it fares their enemies

17- Copper is a non-magnetic material ?

Because it doesn't attract to magnet

18- Decomposers are important for the nature ?

Because it feeds on food remains and the bodies of dead animals

10- The compass is an important tool for travelers ?

Because it indicates the four directions

11- The formation of inverted image through narrow holes ?

Because light travel in straight lines

12- The green glass window seems green ?

Because it absorbs all colors except green pass

13- Magenta is called a secondary colored light ?

Because it formed from the mixing of two primary colors

14- Object's shadow is formed ?

Because light travel in straight lines

15- Moon seems luminous?

Because it reflects sun light

16- Predation is a temporary food relationship ?

Because it ends by devouring the prey

17- The formation of spectrum colors ?

Because white light consists of seven colors

18- Some harmless living organisms imitate other living organisms ?

To frighten their enemies and escape from them

19- Aluminum foil is an opaque material ?

Because it doesn't allow light to pass through

20- Mineral water is considered a mixture ?

Because it consists of more than one type of matter

21- We can see objects clearly behind a glass sheet ?

Because glass is a transparent material

22- Green plants are self feeding = autotrophic organism ?

Because it makes its own food by photosynthesis process

23- Tape worm is a parasite ?

Because it harms its host and causes diseases

24- A tissue paper is semi-transparent material ?

Because it allows some of light to pass through

25- The electromagnet is very important ?

Because it is used to lift heavy iron blocks and making many devices as electric bell

26- Some plants are known as insectivorous plants?

Because it devours insects to get protein

27- The presence of battery in the electromagnet is important ?

Because battery is the source of electric current

28- Saprophytic organisms are decomposers?

Because it decomposes the bodies of dead animals

29- We see the white object as it is ?

Because it reflects all colors fall on it

30- Dissolving 50 gm. of sugar in one liter of water is faster than in half liter of water ?

because when the amount of solvent increases the solubility process increase

### **Mention one function :**

#### **Prism :**

It Separates of white light into seven spectrum colors

#### **Compass :**

Determine ( find ) 4 main directions

### Dynamo :

- Change kinetic energy to electric energy or
- Generate electricity to light cities or operate factories

### Electromagnet :

- Making winches ( cranes )
- Making mixer
- Making electric bell
- Making T.V
- Change electric energy into magnetic energy

### Laser light :

Used in Communication –Medicine – Computers

### Give one Example of Each of the following:

**Predation:** rat and cat, tiger and deer

**Mutualism:** The relation between Nodular bacteria and leguminous plants, Relationship between Insects and flowers of plants

**Commensalism:** Relationship between Hippopotamus and some birds

**External parasites:** Mosquitoes, Lice, Fleas

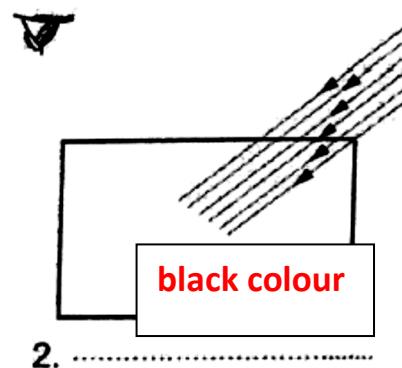
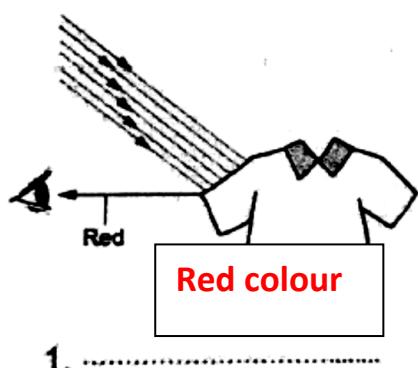
**Internal parasites :** Bilharzias worms, Flaria worms, Tape worms and Ascaris worms

**Mimicry:** Some bees look like wasps

**Camouflage:** Butterfly, Frog, Chameleon and Cuttlefish (**sepia**)

**Saprophytes:** bread mould fungus – mushroom fungus

**[B] What is the colour of the body in each case ... ?**



[B] Study the following figures, then :

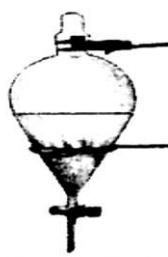


Figure (A)

- The figure represents the

Separating funnel

- Function

Separate heterogenous solution

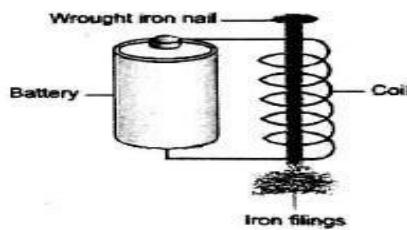


Figure (B)

- The figure represents the

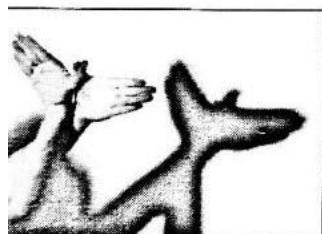
Electro magnet

- Function

Change electric energy into magnetic

[A] Choose the correct answer for the following diagrams, then complete the following sentences :

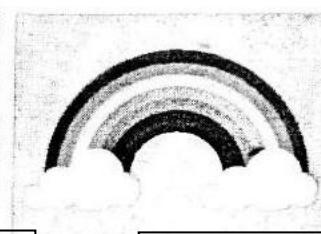
(Light reflection – Rainbow – Light refraction – U shape magnet – Shadow)



a. shadow



Light refraction



rainbow



U shape magnet

Look at the opposite figure then answer :

1. The figure represent

The electromagnet

2. Label the figure :

① .....

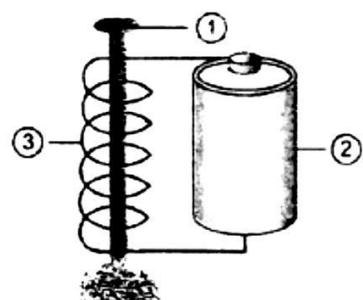
Wrought iron

② .....

Battery

③ .....

Coiled copper wire



**Choose The correct answer:-**

1. Light rays that can be seen are called .....( **visible spectrum** - infrared - ultraviolet - all the previous)

2. Light transmit in .....lines ( curved - broken - **straight**)

3. Light propagates in.....lines ( **straight** - curved - refracted )

4. Light travel in straight lines .this principle is the idea of making .....(iron - radio- heater – **camera**)

5. The nearer objects to the light source has the .....shadow  
( smaller – **bigger** – fainted)

6. Light cannot be pass through .....materials  
( transparent - semitransparent - **opaque** )

7. A sheet of aluminium foils an example for .....material( transparent – translucent – **opaque** - all the previous )

8-The light bouncing from a plane mirror is known as ....( regular refraction – **regular reflection** – irregular reflection – irregular refraction)

9. We can see things as a result of .....of rays  
( **reflection** - refraction-absorption – analysis)

10. If you put an object at distance of 30 cm in front of a mirror, the distance between the image the mirror equals..... cm( 10 - **30** – 60 -2)

11. If you put an object at distance of 20 cm in front of a mirror, the distance between the image the object equals ( 10 cm – 20cm- 30 cm – **40cm**)

12. Light is reflected.....when it falls on smooth bright surface

(**regularly** – irregularly – are refracted – are scattered )

13. The speed of light in air is .....that in water

(**faster than** – equal to – slower than – half )

14. Light is a form of energy ( ✓ - ✗ )



15. Light transmits in straight lines ( ✓ - ✗ )

16. The formed image through narrow holes is inverted ( ✓ - ✗ )

17. Object shadow is formed because light travel in curved lines ( ✓ - ✗ )

### ☺straight lines

18. The body nearer to the light source has the greater shadow( ✓ - ✗ )

19. The formation of shadow indicates that light travel in curved lines ( ✓ - ✗ )      **☺ straight lines**

20. Carton paper is an opaque material ( ✓ - ✗ )

21. The moon seems luminous as it reflects the sunlight ( ✓ - ✗ )

22. A rainbow is formed when the sun separates the moon light ( ✓ - ✗ )

### ☺Sun light

23. there is dark shadow for clear water ( ✓ - ✗ )

### clear water has no shadow

**Complete:**

1. The object image formed through narrow holes is minimized and inverted

2. The material in which light can transmit through is called transparent material

3. The material which allow (let) most light pass through (transmit) are called transparent material

4. Light can easily be transmitted through transparent material.

5. Light can easily be transmitted through transparent and semitransparent materials

6. The material which we can see objects clearly behind it is called transparent material

7. The materials that objects can be seen through, are called transparent material

8. Clear water is a transparent material while wood is opaque material.

9. Light bouncing after falling on an object is called light reflection.

10. Light reflects regularly when it falls on smooth and shiny surface.

11. Light reflects when it fall on reflection surface.

12. The change in the direction of light rays when light passes through the separation surface between two transparent media is called light refraction

13. The light refract when transfers between two different media

14. The light refraction is the reason for seeing the spoon broken in the cup of water .



15. Light refracts when it transfer between two **transparent** media.

16. When a light rays pass from a glass rod to air ,it **refract**

17. The prism separates sun light into **7 spectrum color**

18. White light can split into **7** color that are called **spectrum colors**.

19. Light **separate** into seven color when passes through prism, but it refract when it passes from water to air.

20. sun light is separated into **7** colors by passing it through a **glass prism**.

21. Rainbow is formed due to the **light separation** as each water drop act as **glass prism** .

22. We can see **rainbow** when sun light passes through water droplets during rain fall.

#### Write S- term:-

\* 1. The light energy that can be seen **(Visible Spectrum)**

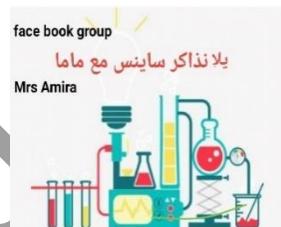
2. It is the main source of light on the earth **( sun)**

3. darkened area formed behind an object once light falls on it **(Shadow)**

\*4. The darkened area that formed as a result of falling light on an opaque object**(Shadow)**

\*5. The material which you can see objects clearly behind them and in full details**( Transparent material )**

6. Materials that objects can be seen clearly through it **(Transparent material)**



7.The material which lets most light pass through it and we can see objects clearly through it (**Transparent material**)

8.The materials doesn't allow light to travel through and objects can't be seen through (**Opaque material**)

9.The material used to cover window of darkened photographic rooms (**Opaque material**)

10.The material that form faint shadow when light falls on them(**Opaque material**)

\*11. The material that doesn't allow light to travel through and objects can't be seen through (**Opaque object**)

12.The material that doesn't allow light to pass through, and objects can't be seen through it (**opaque material**)

13.materials allow some colored light to pass through them (**semitransparent**)

14- The change of light rays directions when they transmit through the separation surface between two different media .(**light refraction**)

15.The seven colors of light which sun light is made of (**✓ spectrum color**).

\*16. Reflection of light on a surface of white paper in one direction.  
(**regular reflection**)



**What is meant by ( define):-**

📖\*1.Visible Spectrum or visible light ☺ it is light energy that can be seen

\*2.shadow ☺darkened area result from falling light on opaque object

3-Transparent material .

☺ It is material which allows most light to pass through and the object can be seen clearly example Clear glass window , Glass cup , Air , Clear Water.

\*4-Translucent material.(semi-transparent)

☺ It is material which lets some light to pass through and object can be seen less clearly example Frosted Light bulbs and Tissue paper.

📖\*5.Opaque material .

☺it is material that doesn't allow Light to pass through and object can't be seen example Rocks , Aluminum foil ,Wood, Books , Carton and People.

📖\*6.Reflection of light

☺It is bouncing of light rays when light falls on reflecting surface .

\*7. Regular reflection

☺It is bouncing of light rays when light falls on smooth and shiny surface and light reflect in one direction ex mirror.

\*8.separation of light

☺ separation of white light into 7 colors called spectrum colors

**Give reason :-**

📖1.Images can be formed by using narrow holes.

📖 2.Formation of image through narrow holes نفس السؤال

☺due to light travel in straight lines .

📖3.The formation of shadow

☺due to light travel in straight lines .

4. Shadow is formed when light falls on opaque object

☺ due to light travel in straight lines .

5. The moon cannot be considered as a source of light.

☺ bec it reflect sun light falls on its surface .

6. you can see your image on a plane mirror

☺ due to light reflection

7. Seeing the pen bending in transparent cup of water.

= 8. A spoon appears broken when you put it in a transparent cup of water.

= 9. A pencil immersed partially in water seems broken.

☺ Due to light refraction

8. \*10. White light can be separated.

☺ bec it consist of 7 spectrum color.

9. Rainbow can be seen after heavy rain falling.

☺ (light separation) bec drop of water in air separate sunlight into 7 spectrum colors ( red – orange – yellow-green – blue – indigo – violet )

### WHAT HAPPENED

1. you look at your image through a transparent material

☺ you see picture clearly

2. You look at picture through frosted glass

☺ I can see the picture less clearly .

3. You look at picture through rock ( or metallic sheet).

☺ I can't see picture

\*4. You look at a mirror .

☺I can see my image due to regular reflection of light.

📖 5. Light falls on a shiny surface

☺ light reflection will happen

📖 6. Sun light falls on a plane mirror

☺ light reflection will happen

\*📖 7. When you look at a spoon in a beaker contains water.

☺ it seems broken due to light refraction.

📖 8. You put a part of the pencil in a cup of water

☺ it seems broken due to light refraction.

\*📖 9. When white light passes through a prism.

☺ it will separate into 7 spectrum colors (red – orange–yellow-green–blue – indigo – violet)

📖 1. Explain briefly Formation of shadow

It is darkened area result from falling light on opaque object due to light travel in straight lines

📖 2. Look at the opposite figure then answer

a) the opposite figure explains refraction phenomenon

b) velocity ( speed) of light in air is faster than the velocity of light in water.



📖 3. Mention the function of prism

☺ used to separate white light into seven spectrum colors ( red – orange – yellow-green – blue – indigo – violet )

📖 4. Explain briefly formation of Rainbow

☺ after heavy rain sun light pass through drop of water light separate to 7 spectrum colors( red – orange – yellow-green – blue – indigo – violet )

Point of Comparison	Transparent Material	Semitransparent (Translucent) Material	Opaque Material
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1..Name the equipment that can use for separation of light into seven colors. ☺**prism**

2- mention the names of the spectrum colors ☺**red – orange – yellow-green – blue – indigo – violet**

3.What is the kind of materials can be used to cover windows of photographic rooms for imaging? ☺**opaque material**

A		B
a) light	4	1- opaque material
b) shadow	6	2- separate light into seven colors
c) Glass	3	3- transparent material
d) Cartoon paper	1	4- propagates in straight lines
e) Prism	2	5- Reflects sun light
		6-A dark area formed behind a body exposed to light

4.Write one use of glass prism – what is the importance of glass prism

☺ **it separate light into 7 spectrum colors.**

### Match

Compare between transparent , translucent and opaque materials

Explain the transmission of light through different material

\*What is the difference between The transparent and opaque material

Define	It is material which allows <b>most light</b> to pass through and the object can be seen <b>clearly</b> .	It is material which allows <b>some light</b> to pass through and the object can be seen <b>less clearly</b> .	It is material which <b>doesn't allow Light</b> to pass through and the object <b>can't be seen</b> .
Examples	Clear glass window-Glass cup-Air-Clear Water-Transparent plastic.	Frosted Light bulbs. Tissue paper.	Rocks-Aluminum foil-Wood-Books-Carton-People.

Compare between Reflection and refraction of light

reflection	refraction
It is the bouncing of light rays when light falls on a reflection surface .	It is the change in the direction of light rays when light passes through the separation surface between two transparent media due to the change in light speed .

### Complete:

1. On mixing all of the seven spectrum colors , the **white light** is produced
2. Red light + Green light + Blue light = **white** Color.
3. The red , green and blue lights are called **primary light**
4. **The red , green and blue** are primary colors
5. The opaque material seems to be colored **it absorb all light and reflect its own color only**
6. **transparent** objects have the same color of light which transmitted through.
7. **coloured opaque** objects seem having the same color of light which it reflects
8. **The transparent** and **translucent** objects have the same color of light which transmitted through

9. The strawberry fruit seems red because it reflects the red color only.

10. As the light falls on the green grass, the grass must absorb all colors except green.

**Write S- term:-**

\*1. The seven colors of light which white light is made up of **( spectrum colors)**

2. A colour light which formed by mixing all primary colour **(White)**.

\*3. A light results from mixing seven spectrum colors is **(White)**.

\*4. A light that is resulted from mixing red and blue and green **(White)**.

5. The colors we can get by mixing two of primary colored **(Secondary color light )**.

\*6. Yellow , purple and cyan color **(secondary color light)**

\*7. The light that we can get by mixing two of the primary colored lights **(secondary color light)**

8. The light that can't be produced by mixing two other colored lights **(primary color light)**

\*9. Red , green and blue light **(primary color light)**

\*10. object that can be seen in the color of their reflected light **(colored opaque object)**

11- The colored light that is produced by mixing red and blue. **(Magenta)**.

12- The colored light that is produce by mixing blue and green. **( Cyan)**.

13- Colored lights that are mixed together to produce cyan light **(Blue + green)**.

14- The object that absorb all light colors and allows it's own color only to pass through

**( colored transparent and translucent)**

15-The objects that reflect all the light colors that fall on them (**White opaque object**).

16- The object that absorb all the light colors that fall on it( **black opaque**).

17- The object that absorb all light colors and reflect its own color (**colored opaque object** ).

**What is meant by ( define):-**

\*1.primary colored light .

☺ **They are colored lights that produced by mixing 2 light colors.**

\*2. Secondary colored light. What is meant by secondary lights

☺ **They are colored lights that produced by mixing 2 of primary colored lights**

\*3. Colored opaque object appear with its own color

☺ **colored opaque absorb all light color and reflect its own color.**

**Choose The correct answer:-**

📖 1.Which of the following is considered as a secondary colour?(yellow - green - blue - red)

📖 2.Red , green and blue light are ....lights(primary- secondary - complementary)

📖 3. If you look at a yellow banana through a green glass sheet it seems ( yellow – green – black – red )

**Put ✓ or ✗:-**

📖 1.Red is the first color in the spectrum colors , but violet is the last color in the spectrum colors (✓)

📖 2.The red color is the first spectrum light while the violet color is the last spectrum light✓)

📖 3.Transparent objects have the same color of the light that doesn't travel through (✗)

☺**Transparent objects have the same color of the light that travel through**

4. When the white light strikes a red rose , it reflects the white color (✗)

☺absorb all light and reflect red

5. An object seems white since it reflects all the colors which the white light is made up of (✓)

6. If you look at yellow banana through a green glass sheet it seems black (✓)

7. The green table reflected all light colors (✗)

☺absorb all light and reflect green

8. Opaque objects have the same color of light which the object reflects

(✗) Colored opaque objects have the same color which the object reflects

9. Blue , green , red lights are primary colored light(✓)

10. When you look to a black body through a glass plate , the body and the plate are seem with the same color.(✓)

11. Yellow ,magenta and blue are primary colored lights(✗)

☺secondary colored lights

12. Yellow , magenta , cyan are primary colors (✗) ☺ Secondary colors

13. Red , green , blue are primary colors(✓)

14. Mixing red , green and blue colors produces the white color(✓)

15. Cyan,purple and yellow are the primary colors. (✗) ☺ Secondary colors

16. Mixing red, green and blue colors produces the white color. (✓)

17. Yellow banana absorbs all spectrum colors and reflect green color (✗) ☺ yellow

**Give reason :-**

1. It is preferred to wear black clothes in winter.

☺( black opaque) absorb all light color.

2. We wear white clothes in summer.

☺ (white opaque) , it reflect all light colors.

3. The transparent and semitransparent bodies appear colored with the light that passes through them.

☺bec. it absorb all light and transmit its color only

4. The green color is considered as a primary color.

☺bec. it can't be produce by mixing two of other colors.

5. Magenta is a secondary color light.

☺bec. It from mixing 2 primary color ( magenta = red+ blue) .

6. White light is mixture color not primitive color light

☺ bec white light made up of 7 spectrum colors .

7. Yellow, magenta and cyan are called secondary colored light

☺bec They are produced by mixing any two of primary colored lights

**yellow = red + green      Magenta = red + blue      -      Cyan = blue + green.**

8. The red transparent ruler appears red when white light fall on it.

☺bec. It absorb all light colors and allow red only to pass.

9. banana seems yellow when sun light falls on it.

☺ (colored opaque) absorb all light colors and reflect yellow.

10. The red apple seems black when you look at it through a green glass sheet.

☺(colored opaque) absorb all light reflect red doesn't transmit through green glass sheet.

11. The yellow banana appears black if you see it through a green transparent glass sheet.

☺bec.( colored opaque) it reflect yellow color and green transparent glass sheet absorb it so the apple seems black.

12. The green glass window seems green.

☺ (colored transparent) absorb all light and allow green only to pass

13. The white clothes appear white when light falls on them.

☺(white opaque), it reflect all light colors.

14. When sun light falls on white paper it appears white.

☺ (white opaque) it reflect all light color.

15. The chalk appears white, while the board appears black.

☺(white opaque) reflect all light color board is black opaque object absorb all light color.

#### WHAT HAPPENED

- \* 1. Mixing green and blue light. ☺ cyan is produced
- 2. Mixing red light with blue light. ☺ magenta is produced
- \* 3. Mixing the seven spectrum colors. ☺white light produced.
- 4. Green light strikes a black object. ☺(black object) absorb all light, it appear black
- 5. White light strikes a red apple. ☺ (colored opaque) absorb all color and reflect red only.
- 6. White light falls on banana fruit .  
☺ (colored opaque) ,it absorb all colors and reflect yellow only .

7. White light strikes a transparent yellow bottle.

☺ **colored transparent)** absorb all light colors ,allow yellow to pass.

8. White light strikes a transparent blue glass the blue light only passes through.

☺ **(colored transparent)** absorb all light color and allow blue only to pass.

9. You look at green apple through a red glass sheet. ☺ **Form black color ( no color).**

10. Blue light strikes red glass sheet. ☺ **Form black color ( no color).**

11. White light falls on a white ball.

☺ **(white opaque)** ,it reflect all light color.

12. White light falls on an orange transparent box.

☺ **it absorbs all light colors and allow orange color only to pass.**

13. White light passes through prism

☺ **it separate into 7 spectrum colors.**

📖📖 \*Compare between Primary and secondary lights.

Primary light	secondary
They are colored lights which impossible to be produced by mixing 2 of other colored light	They are colored lights that produced by mixing 2 of primary colored
Ex : red – green - blue	Ex:- yellow – magenta - cyan

Complete:

📖 1. The ancient Greek discovered the black rocks in a region called magnesia ,these rocks attract the materials which made of iron

📖 2. Matter can be divided into magnetic materials and nonmagnetic materials due to their magnetic abilities.

3.The magnetic pole that always refers to the north direction of the earth is called the **north pole**

4.The magnetic force is most powerful at the **poles** of magnet

5.Like poles **repel** but unlike poles **attract** each other.

6.Like magnetic poles **repel** and dislike ones **attract** each other

7.The magnetic forces concentrated at **two poles** of the magnet

8.The **magnetic field** is a space surrounding a magnet in which the magnetic force appear

9.The **compass** contains a small light magnet moves freely around a fixed axis

10.A magnet pole that always refers to the north direction called **north**

11.Compass consists of **small needle magnet freely** move.

12.Seafarers use **compass** during their navigation in oceans.

### **Choose:-**

1.The natural magnet is discovered since .....ago ( **2000** - 3500 - 2050 - 2500 )

2.When a magnet is hanged freely , its north pole refer toward the .....

( **north** - south – east-west)

3.When the magnet is hanged freely it will take the direction.....( north and east - east and south **-south and north** - west and east)

4.The compass contains.....( horse shoe magnet - bar magnet - **small magnetic needle** - ring magnet )

5.....is a magnetic material. ( **iron**- aluminum - copper )

### **Write S- term:-**

\*1.A material gets attracted to the magnet (**Magnetic material**)

2. The materials that don't get attracted to the magnet (**Nonmagnetic material**)

3.The pole of the magnet which points to the north direction of the earth (**north pole**)

4. The pole of the magnet that attracts with north pole of another magnet **(south pole)**

5. The two ends of the magnet where the magnetic force is most powerful **(two poles)**

6. A region of the magnet has the most powerful force of attraction **(two poles )**

7. An area of the magnet where the magnetic force is most powerful **(two poles)**

8. The space around a magnet in which the magnetic force appears through **(Magnetic field)**

9. A region around the magnet at which the effect of the magnetism appear. **(Magnetic field)**

10. A set that used for locating the main four geographical direction **(Compass)**

11. An object that consists of a small light magnetic needle that can spin freely around a fixed axis **(Compass)**

12. A tool that is used for locating the main four geographic directions **(Compass)**

13. The force by which the magnet attracts some materials **( magnetic force)**

14. A materials that are attracted to the magnet. **(magnetic material)**

#### what is meant by ( define):-

1. What is meant by Magnetic materials

☺**They are materials that attract the magnet**

2. What is meant by magnetic field

3. What is the magnetic field?

☺**It is the space around the magnet at which effect of magnetic force appears**

#### \*4.poles of magnet

☺ region of magnet have most powerful attraction force

\*5.magnetic force ☺ ability of magnet to attract magnetic materials in its field

put ✓ or ✗:-

1.Natural magnet is one of the iron ores (magnetite) (✓)

2.A magnet attracts all materials( ✗ )

☺magnet attract magnetic material only

3.Aluminium gets attracted to the magnet ( ✗ )

☺Aluminium (nonmetal) doesn't attract to magnet

4.The magnet has three poles ( ✗ ) ☺2 poles

5.like poles repel and unlike poles attract (✓)

6.The magnetic field is the space surrounding the magnet where the magnetic force appears (✓)

Give reason :-

1. Some materials are magnetic materials.

☺bec they attract to magnet

2. Aluminum , copper and glass are non-magnetic materials.

☺bec they are not attracted to magnet

#### WHAT HAPPENED

\*1.What happens when a magnet is hanged freely to move

☺it Take fixed direction (N-S)

\*2.What happens when the north pole of a magnet get nearer to a south pole for other magnet

☺They are attracted

BOOK \*3.What happens when fixing a needle magnet on a piece of cork , then put it in a basin containing water

☺The north pole refer to north pole of earth , south pole refer to south of earth

BOOK 4.What happens when you approach the north pole of a magnet to the south pole of another magnet

☺It will attract each other

BOOK 1.Name the equipment that can use for Fixing the north and south directions.☺compass

BOOK 5.Mention the properties of the magnet.

☺has two poles -when it move freely it take a fixed direction (North south direction) - like pole repel but dislike poles attract each other - the magnet surrounded by area called magnetic field

BOOK 8.Mention the function of compass

☺knowing the four directions

BOOK BOOK Compare between magnetic materials and nonmagnetic materials

	Magnetic material	Nonmagnetic material
Define	They are the material which are attracted to the magnet	They are the material which are <u>not</u> attracted to the magnet
Examples	Iron – Nickel – steel - cobalt	Chalk – glass – paper – aluminium – copper- wood- leather- plastic

**Complete:**

- 1. When an electric current flows through a wire twisted (winding) around a wrought iron nail , the nail becomes an **electromagnet**
- 2. Electromagnet consists of **copper wire** and **wrought iron nail** and **a battery**
- 3. The electric magnet losses its magnetism when **cutting the electric current**
- 4. **huge electromagnet** is used to pick up (move) the huge iron masses.
- 5. The basic idea of electric generator is the changing of **mechanical( kinetic)energy** to **electric energy** .
- 6. When you move a coil between two poles of a magnet ,**an electric current** is generated in the coil.
- 7. The scientific idea of dynamo depend on the conversion of the **mechanical( kinetic)** into **electric** energy.
- 8. The electric current produced by the electric generator (dynamo) increase when **using strong magnet** or **number of turns of coil** get increased.
- 9. The apparatus that converts kinetic energy into electric energy is called the **dynamo**.
- 10. From examples of artificial magnet **ring** magnet ,while **electromagnet** is temperory magnet.

**Choose:-**

- 1. When the compass is put beside a wire carrying electric current...  
(no deflection occurs - **the needle deflects** - the needle destroyed - no correct answer)
- 2. When the compass is put beside a wire carrying an electric current  
( no deflection – **the compass needle deflects** – the compass needle will be destroyed )
- 3. When an electric current passes through a coil twisted around a wrought iron bar , the wrought iron bar becomes a .....magnet ( **temporary** – permanent – natural –a and b )

4. An electric current is generated in a coil of an insulated wire when you move a .....inside the coil (copper bar – wooden bar – **bar magnet** – nonmagnetic bar )

5. The magnet which is made by effect of electricity is called (natural magnet – **electromagnet** – magnetic – b and c)

6. The electric generator ( dynamo) works on changing.....( **kinetic energy into electric energy** – electric energy into mechanical energy – magnetic energy into mechanical energy – electric energy into magnetic energy)

7. The dynamo.....(change the electric energy into the mechanical one - **changes the mechanical energy into the electric one** - change the mechanical energy into the thermal one ).

8. The coil of dynamo is made up of ....wire( **copper** – carbon – aluminum )

9. The dynamo is fixed in the bicycle ....( seat – pedal – **tire** )

10. Thy dynamo generate ..... energy from mechanical energy .

( thermal – **electrical** – light )

**Write S- term:-**

\*1. A set used to change the mechanical energy to the electric one

**(Dynamo = electric generator)**

\*2. A device used to convert kinetic energy into electric energy

**(Dynamo = electric generator)**

3. A set used to generate the electric current by using a magnet and a coil

**(Dynamo )**

**put ✓ or ✗:-**

1. Magnetism is always relater with electricity (✓)

2. The electromagnet consist of an iron bar and a coil (✗)

3. An electric current can be generated by using a magnet (✓)

4. An electromagnet is formed when an electric current passes through a compass (x)

☺ An electromagnet is formed when an electric current passes through a copper coil around wrought iron bar.

5. The electromagnet losses its power when cutting the electric current (✓)

6. The deflection of the ammeter's pointer increase by increasing the speed of motion of the coil (✓)

7. Magnetism is always related with electricity (✓)

What is meant by ( define):-electromagnet

☺ magnet which is made by electricity

Give reason :-

1. The deviation of the ammeter's pointer when move a wire between the two poles of the magnet up and down.

☺ bec electric current

\*2. Dynamo can change mechanical energy into electric one

☺ by moving magnet in a copper coil generate electricity

3. The electromagnet losses its power when the electric current is cut.

☺ bec electromagnet is a magnet made by electricity

**WHAT HAPPENED**

1. What happens when passing of electric current in a wire wrapped around a rod of soft iron. ☺ it become temporary magnet

\*2. What happens on moving a wire up and down between the two poles of a magnet

☺ electric current produced

3. What is meant by electromagnet

☺(it is the magnet which is made by electricity) Consists of Copper wire –

**wrought iron bar – battery Change electric energy into magnetic energy**

4. Mention the function of electric magnet (what is the importance of electromagnet?)

☺ in factories electromagnet used to lift heavy iron blocks, electric bell , electric mixer , disc drive , TV

5. Name the equipment that can use for Converting of mechanical energy into electric energy ☺ **dynamo**

6. Mention some sets and instruments in which the electromagnet can be used?

☺ **electric bell , electric mixer , disc drive , TV**

7. Mention one use of huge electromagnet

☺ generate electricity used for lighting cities and operating factories

8. use these words to complete ( poles – repel – attract – unlike – magnetic field – compass – electromagnet – electric generator – motor – angle of incidence – angle of reflection)

\* The compass has a small light magnet moves freely around a fixed axis .

\* The magnetic field is the space surrounding a magnet in which the magnetic force appears ---through.

\* The magnetic force is most powerful at the poles of the magnet.

\* Like poles repel each other.

\* unlike Poles attract.

\* When an electric current travels through a wire twisted around an iron nail , the nail ---becomes an electromagnet

\* A set that changes the mechanical energy into electrical one is known as an electric generator

9. The magnetic field can be seen by detected iron filings

☺ **magnetic field is space around the magnet in which the effect of magnet**

**appear , the iron filling take increase at 2 poles and disappear in the middle**

\*1-Compare between natural magnet and electromagnet

natural magnet	electromagnet
it is black rock , one of iron ores attract magnetic materials	it is the magnet which is made by electricity)  Consists of Copper wire – wrought iron bar - battery  Change electric energy into magnetic energy

\*2-Compare between electromagnet and dynamo

	electromagnet	dynamo
structure	Coiled Copper wire – wrought iron bar - battery	Coiled copper wire- magnet
Idea of working	Change electric energy into magnetic energy	Change kinetic energy into electric energy
uses	Lift heavy iron blocks – electric bell – TV – electric mixer – disc drive	Generate electricity – light cities and factories

**Unit 2 ( mixtures )****Complete:**

- 1. Shaking and Grinding are ways of mixing solid materials
- 2. Magnetic attraction is a way of separating mixtures.
- 3. Solution is a type of mixture
- 4. Water is considered as a common solvent due to its ability to dissolve several substances.
- 5. Mixing a small amount of mud with water can be separated by filtration
- 6. increasing the quantity of solvent decrease the solubility time
- 7. Solubility process needs the presence of solute and solvent
- 8. The speed of solubility increase by increasing stirring process
- 9. increasing solvent reduce the solubility time.
- 10. increasing temperature decrease the solubility time
- 11. Evaporation process is used to separate salt from salty water, while magnetic attraction is used to separate iron from iron and sand
- 12. Fruit salad is an example of solid-solid mixture, while soda water is an example of gas-liquid mixture
- 13. in salty solution, salt is the solute, while water is the solvent
- 14. The factors that affect the speed of solubility are temperature, stirring and quantity of solvent

**Choose:-**

- 1. When you mix two or more kinds of matters together, the produced matter is called .....(element - compound - mixture )
- 2-.....is used to separate a mixture of oil and water  
( Evaporation - filtration - separating funnel )
- 3. The apple juice considered as .....( liquid mixture - solution - solid mixture - a& b together)

4. The material that dissolves to produce solution is called .....

( solvent - **solute** - mixture )

5. All the following are examples of mixtures except (concrete- milk – **sugar**)

6. The speed of the solubility process..... by increasing the temperature  
(**increase** – decrease-doesn't change)

7. The solvent in a mixture of chocolate and milk is..... (**milk** – chocolate – water)

8. The mixture of iron filling and sand can be separated by (**magnetic attraction** – Evaporation – filtration)

9. Solution is a (**mixture** – solid-pure substance)

#### **Write S- term:-**

\*1. The mixture results from the solubility of solids in liquid .

( **Solid – liquid mixture** )or **solution**

2. A mixture produced by dissolving carbon dioxide gas in sugary solution

(**Gaseous - liquid mixture "soda water"**)

\*3. A process used in formation of a solution ( **solubility** )

4. Leaving an amount of sea water exposed to sun rays for many days ( **evaporation** )

\*5. Heating a salty solution gently ( **evaporation** )

\*6. leaving some sea water exposed to sun for many days ( **evaporation** )

\*7. The material at which the solute disappear in it. ( **solvent** )

\*8. A process needs the presence of solvent and solute ( **solubility process** )

\*9. Adding an amount of sugar to water with stirring ( **solution** )

10. The process of formation a solution. ( **solubility process** )

\*11. Mixing several types of fruit juices together ( **liquid-liquid mixture** )

\*12. Dissolving of carbon dioxide gas in a sugary solution ( **gas-liquid mixture** )

13. The substance that is made of only one type of identical particles (**pure substance**)

14. An apparatus used to separate immiscible liquid mixtures (**separating funnel**)

15. A set is used to separate water-oil mixture (**separating funnel**)

**What is meant by:-**

1. pure substance or pure matter

☺ It is the substance that made of only one identical particle ,

ex:- Distilled water – sugar – baking soda

2. mixture

☺ It is a substance that is made of more than one type of particles,

Ex:- Concrete – milk – tomato sauce

3. solution      ☺ it is a homogeneous mixture in which solute breaks down into basic particles that spread in solvent

4. solubility      ☺ process by which solute dissolves in solvent leading disappearance of solute

5. Solvent :- the material at which the solute disappear in it

**Mention one use( the function):-**

1. Filter paper      ☺ used to separate insoluble solid from liquid

2. Separating funnel      ☺ used to separate 2 liquids don't mix (oil – water)(immiscible liquids)

**Give reason :-**

1. A magnet can be used to separate iron fillings from sand

☺ bec Magnet attract only magnetic material (iron filling)

2. Some mixtures can be separated by using a separating funnel

☺ used to separate 2 liquids don't mix (oil – water)(immiscible liquids)

3. No ,mixing will happen on adding sand to water

☺bec sand is insoluble in water

📖 4. Milk is mixture

☺ Bec it consists of more than one type of particles

📖 \*5. Air is a mixture .

☺bec air consist of different gases (oxygen – nitrogen- carbon dioxide – water vapour)

📖 \*6. Solution is a type of mixtures.

☺bec it consist of more than one type of particles

📖 \*7. There are different types of mixture.

☺ solid solid mixture (fruit salad) , liquid liquid mixture (water- oil )

Gas gas mixture (air) , solid liquid mixture (sand and water)

Gas liquid mixture (soda water )

📖 \*8. Water is considered as a common solvent.

☺bec thousands of solute dissolve in it

📖 \*9. The time of dissolving sodium chloride is differing than time of dissolving sodium carbonate.

☺bec sodium chloride is soluble and sodium carbonate is insoluble

📖 10. Sugar dissolves in 300. L of water faster than 150 ml of water

When amount of solvent increase → solubility increase → solubility time decrease

**What happen when :-**

1. Shaking or stirring some sugar with water

☺ A sugar solution

2. Heating salty water for a long time

☺ water evaporates - salt remain.

3. Leaving an amount of sea water exposed to sunlight for days

☺ water evaporates - salt remain.

4. Dissolving carbon dioxide gas in a sugary solution

☺ formation of soda water ( gaseous-liquid mixture)

5. The magnet is used to separate iron filings and sand.

☺ only iron filing attract to the magnet bec it is magnetic material

6. Mixing different types of juices together

☺ liquid – liquid mixture

7. stirring two equal amounts of sugar in two beakers contain unequal amount of water

☺ When amount of solvent increase → solubility increase → solubility time decrease

8. Mixed a little amount of oil in water

Water doesn't mix with oil

**put ✓ or ✗ and correct :-**

1. Mixtures can be formed by shaking , grinding or stirring(✓)

2. Filtration is used to separate a mixture of solid materials(✗)

☺ insoluble solid in water

3. Filtration is used to separate soluble solid materials(✗)

☺ insoluble materials

4. The oil and water can be separated by filtration(✗)

## ☺By separating funnel

📖 5. vegetable salad is considered a mixture (✓)

📖 6. Filtration is used to separate oil – water mixture (✗)

## ☺Separating funnel

📖 7. Salt and water are mixed together by stirring or heating (✗)

## ☺or shaking

📖 8. Solubility , filtration and evaporation are ways of separating mixtures (✗)

## ☺ Magnetic attraction , filtration and evaporation

📖 9. We use filtration process to separates mixtures which have deposits (✓)

📖 10. We can use evaporation process to separate crushed coffee from water (✗)

## ☺) Filtration

📖 11. Mixtures can be separated by the magnetic attraction , filtration and evaporation (✓)

📖 12. Solvent is a liquid used to dissolve the solid material in it (✓)

📖 13. The solubility time increase as the amount of solvent decrease (✓)

📖 14. Solubility speed decreases by shaking and rising the temperature. (✗)

## ☺increase

📖 15. The solubility speed of solid increases by grinding . (✓)

📖 16. Solvent + solute solubility process solution. (✓)

📖 17. Increasing the amount of solvent decreases the speed of solubility. (✗)

## ☺increase

### **1. Show how can you separate:-**

📖 1. salt from salty water

☺**by evaporation water evaporates - salt remain.**

📖 2. sand from sand- water mixture

## ☺filtration

3. mixture of steel paper clips and flour

☺(magnetic attraction) Magnet attract only magnetic material (paper clips)

4. Coffee from water

## ☺filtration

5. iron filling from sand

☺(magnetic attraction) Magnet attract only magnetic material (iron fillings)

6. Oil from water solution

## ☺ separating funnel

4. Name three types of mixtures in a table according to their component

Solid – solid mixture	Liquid - liquid mixture	Gaseous - gaseous mixture
it consist of 2 or more different solids	It consist of 2 or more different liquids	it consist of different gases
Example :- fruit salad – vegetable salad	Example :- mixture of vinegar and water - Mixture of oil and water - mixture of oil and vinegar	Example :- air ( mixture of oxygen – nitrogen- carbondioxide – water vapour)

5. look at the figure



A) what is the mixture that can be separated in the figure?

☺ iron filling + sand

b) mention the way of separation in this case? Give the reason?

☺(magnetic attraction) Magnet attract only magnetic material (iron fillings)

📖 6. look at the opposite figure

a) What is shown by this figure



separating funnel

b) function :- it use to separate 2 immiscible liquid(don't mix)

b) What is the mixture that can be separated by this tool?

it use to separate 2 immiscible liquid(don't mix)

📖 7. look at the opposite figure then answer



a) What is the type of mixture ? ☺Solid – solid mixture

b) Does the mixing process affect the properties of each component in the mixture? ☺No

📖 8. Which process is faster and why the dissolving of a quantity of salt in hot water, and dissolving the same quantity of salt in the same quantity of cold water

☺ When temperature increase → solubility increase → solubility time decrease

📖 9. Which process is faster and why the dissolving of a quantity of sugar in water stirring , and dissolving the same quantity of sugar in the same quantity of water without stirring

☺stirring → solubility increase → solubility time decrease

📖 10. Name the equipment that can use for Separation a mixture of oil and water ☺separating funnel

A	B
a) Salt	2
b) oil and water mixture	1
c) pure water	4
d) iron filings and sand mixture	5
	1- can be separated by separation funnel 2- can be separated by evaporation 3- can be separated by filtration 4- pure substance 5- can be separated by using a magnet.

📖 \*2. Compare between Pure substances and mixtures.

	Pure substances	mixtures
Define	it is the substance that made of only one type of particle	it is substance that consists of more than one type of particles
Example	Distilled water – sugar – baking soda	Concrete – milk – tomato sauce

📖 \*3. What is the difference between the solvent and the solute.

solvent	solute
---------	--------

It is a substance which solute dissolve Ex:- water	It is a substance which dissolve in solvent Ex:- salt
---	--

📖 \*6. Compare between Mixture and solution.(what is the difference between solution –mixture)

Mixture	solution
Substance that consists of more than one type of particle	Homogeneous mixture in which solute break down into basic particles spread through solvent
Fruit salad	Sugary solution

### Complete

📖 1. Green plants are producer organisms

📖 2. predation help preys in getting rid of weak or sick members.

📖 3. The food relationship among cat and rat is predation

📖 4. The food relation ship in which one living organism devorous another one is know as predation

📖 5. Green plants are autotrophic organisms

📖 6. Camoflage and mimicry are from the ways of self-defence against pridation

📖 7. Dionaea and drosera are plants prey on insects to get required elements for making protein.

📖 8. Some autotrophic plants have to prey insects to get their required elements for making protein

📖 9. The food relationship in which both organisms benefit from each other is known as mutualism

10. The food relationship between nodular bacteria and bean plant is called **mutualism**

11. fungi are considered as **saprophyt**

12. Decomposers are considered the **saprophyt** of nature.

13. Mashroom is example of **saprophyt**, while commensalism is one type of **symbiosis** relationship among living organisms.

14. Some types of mosquitoes infect **man** with **malaria** disease

15. Mosquito is an **external** parasite, while ascaris worm is an **internal** parasite.

16. **Falaria** worm cause elephantiasis disease .

17. Bilharzia worm is **an internal parasites**

18. bilharzia worms hurt man and are named internal **parasite**, while the organisms they hurt are called **host**.

19. **bug** is an example of external parasites.

20. **Ecosystem** is any **natural** are including living and nonliving organisms.

21. Some human activities as **cutting trees , burning forest** leads to destroy environmental balance.

**Choose:-**

1. Bacteria is a ..... (producer - parasite - **decomposer**)

2. The process of photosynthesis is done by a .....living organism. ( **producer** - decomposer - consumer)

3. Green plants are considered as .....organisms.

( decomposer - **producers** - consumers)

4-.....takes place by some living organisms to hide from their enemies  
( commensalism - parasitism – **camouflage**)

5. Chamileon tends to make ( mimicry – **camouflage** – symbiosis )

6. Predation acts to .... the number of prey. ( **Constant** - double - decrease )

7-predation .....the number of prey in ecosystem ( increase – decrease –

organize)

8. The food relation between cat and rat is an example of ( parasitism – **predation** – symbiosis )

9. The food relation ship that occurs between predator and prey ( symbiosis – saprophytism – **predation** )

10. The animal that devouring other animal called....  
( parasite - host - prey - **predator**)

11. Plants that can't make their protein are called ( hosts – preys – **insectivorous plant** – parasites )

12. Bilhaziasis decrease is caused by ( **bilharzia worm** – filarial worm – mosquito)

13. Bilharzia worm is an ..... parasite ( external – **internal** – both)

14. Mosquito conveys ..... disease to man ( plague – **malaria** – elephantiasis )

15. All the following are external parasite except ( lice – ticks – **liver warm**)

16. The jawless lamprey is a ( host – **external parasite** – predator – internal parasite)

17. An examples of decomposers is the ( **fungi** – rabbits – plants – lions)

18. A water pond is a ..... ecosystem ( **small** – large – very large )

19. Dainosaurs are extinct animals due to( pollution –overhunting – **change in natural conditions**)

20. All the following cause a disturbance to the environmental balance except  
( cutting down trees – natural change – disappearance of organisms – **saprophytes** )

**Write S- term:-**

1. Food relationship between organisms get their food by devouring other organisms. **(predation)**

2. A temporary relationship which ends up by devouring the prey or part of it **(predation)**

\*3. A temporary relationship between two different living organisms that benefits one and harms other **(predation)**

4. Relationship between a lion and a deer **(predation)**

5. A phenomenon in which harmless living organism imitate other harmful or poisonous living organisms to fighten their enemies and escape from them **( mimicry )**

6. Phenomenon in which organisms simulate the colour of the environment **( camouflage )**

7. Phenomenon where living organisms can change its colour to hide from enemies **( camouflage )**

8. Relationship in which the organism get its food by decomposing the dead bodies

**( Saprophytism )**

9. Living organisms which decompose dead organisms. **( Saprophytes )**

10. The organisms which help to get rid of dead organisms. **( Saprophytes )**

\*11. A relation between two living organisms that benefit from each other **( mutualism )**

\*12. A superficial relation between two living organisms that one benefits and the other doesn't benefit or harm the first one **( commensalism )**

\*13. A kind of parasites may live on host's body to get their food **( external parasite )**

\*14. the organisms which help to get rid of dead organisms **( decomposers )**

15. The living organisms that clean the earth's surface from dead bodies  
**( decomposers )**

16. The natural area including living organisms and non-living food. **(ecosystem)**

17. It is the balance among the components of ecosystem  
**( environmental balance )**

**What is meant by= define**

\*1. Camouflage ☺ a phenomenon in which L.o hides from enemies by changing its color to stimulate color of environment

\*2. mimicry ☺ phenomenon in which harmless L.o imitate harmful or poisonous L.o to fear enemies and escape from them

\*3. Mutualism ☺ it is a food relationship between 2 L.O each of them benefit from other and not harmed

\*4. commensalism

☺ food relationship between 2 L.o one benefit from other while other neither benefit nor harmed

\*5. Parasitism ☺ it is a food relationship between 2 L.o one benefit ( parasite ) but other is harmed ( host )

6. Ecosystem ☺ any natural area including living organisms (as planet – animals ) and non living things (as water – soil –air)

Give one example for large ecosystem ( ocean )

What is the function of camouflage for frog ?

☺to hide from enemies

**Give reason :-**

\*1. plants are the main food for lion although lions are carnivores

☺bec prey of lion feed on plants

\* 2.the relationship between sponge and tiny aquatic living organisms is a commensalism

☺bec remora feed on food remains but shark doesn't benefit nor harmed

\*3.Decomposers are considered guards of nature

☺bec they decompose dead bodies of L.O and return back food element to environment

\*4.Tape worm is a parasite

☺bec tape worm depend on host to get its food ( digested food or tissues and cells )and cause diseases

📖📖\*5.The parasite doesn't kill its host.

☺bec parasite will lose its food and shelter

📖\*6.Parasitism may be external or internal.

☺external parasitism the parasite live externally on host's body example mosquitoes – lice – ticks

But internal parasitism the parasite live inside host's body example bilharzia worm – ascaris worm

📖\*7.Green plants can make their own food.

☺ make its own food by photosynthesis process

📖8.Green plants are called autotrophic

☺ make its own food by photosynthesis process

📖9.Some plants eat tiny insects

☺ to make protein

📖\*10.Predation is temporary food relationship.

☺bec it ends by devouring prey

📖\*11.Saprophytic organisms feed on the bodies of dead organism

☺\* to get their food and make environmental balance

12.The relationship between the nodular bacteria and bean plant is an example for mutualism relationship.

☺bec each of them benefit from other and not harmed

**What happen when :-**

1.Absence of preys in the ecosystem

☺ environmental imbalance

2. There is no predator

☺ environmental imbalance

3. Bacteria completely disappear

☺ environmental imbalance

4 .when cutting down of trees

☺environmental imbalance

What is the difference between the external and internal parasites.

☺external parasitism the parasite live externally on host's body example mosquitoes – lice – ticks

But internal parasitism the parasite live inside host's body example bilharzia worm – ascaris worm

**put ✓ or ✗ and correct :-**

1.Fungi feeding on the dead organisms bodies are called saprophytes (✓).

2.Among the different types of fungi, mushroom is distinguished by its ability to make its food. (✗)inability

3.Some living organisms can change its color to simulate the colors of the environment where it lives to hide from their enemies. (✓)

4.The relation between flaria worm and man is a parasitism relationship. (✓).

5.Predation is a temporary relationship between predator and prey (✓)

6.There are no food relation ships between living organisms (✗)

7.The interaction between among environmental components leads to

**unbalance of ecosystem(✗) balance**

8.The balance of ecosystem occurs due interfere of man(✗)imbalance

1.\*Compare between Parasitism and saprophytism.

Parasitism	saprophytism
☺ food relationship between 2 L.o one benefit from other ( parasite) but the other is harmed ( host)	food relationship in which saprophytes get food by decomposing food remains or body of dead bodies
Ex:- lice – fleas – bugs – tickes - worms	Ex :- mushroom – bread – mold fungus

\*8.Compare between externally parasite and internally parasite

externally parasite	internally parasites
Live on host's body feed on sucking blood	Live inside host's body
Ex:- mosquitoes – lice - bugs	Ex: bilharzia – ascaris - tape

\*9.Compare between Commensalism and parasitism.

Commensalism	Parasitism
It is food relationship between 2 L.O one benefit from other and other neither benefit nor harmed	☺ it is a food relationship between 2 L.o one benefit from other ( parasite) but other is harmed ( host)
Ex:- bird and crocodile - bird and hippo	Ex:- bilharzia worm and man


**10. Compare between Saprophytism and parasitism**

<b>saprophytism</b>	<b>Parasitism</b>
It is a food relationship in which decomposer get food by decomposing food remains or body of dead organisms	☺ it is a food relationship between 2 different L.o one benefit from other ( parasite) but the other one is harmed ( host)
Ex :- bread mold fungus and bread	Ex:- tape worm and man

<b>A</b>	<b>B</b>
a) A mosquito	3
b) flaria worm	1
c) bread mould fungus	5
d) fleas	2
e) Ascaris worms	4
	1- Causes elephantiasis 2- Conveys small pox 3- Causes malaria 4- Causes anemia 5- Causes bread mould 6- causes plague

<b>A</b>	<b>B</b>
a-A food relationship between man and liver worm	5
b)A food relationship between bean plant and nodular bacteria	6
c) A food relationship between fungi and splashed bread.	4
d) A food relationship between cat and rat	1
	1- Predation 2- Externally parasitism 3- Commensalism 4- Saprophytism 5- internally parasitism 6- mutualism

(A)	(B)
1. Mosquito	(d) a. make their food during photosynthesis process
2. Commensalism	(c) b. is considered from the insectivorous
3. Drosera	(b) c. is a food relationship between two living organisms
4. Producers	(a) where one of them get benefits from other while the other neither gets benefit nor harmed d. is considered as an external parasitism

(A)	(B)
1. Saprophytism	(b) a. the relationship between man and worms
2. Mutualism	(c) b. a relationship between fungi and food remains
3. Parasitism	(a) c. the relationship between the nodular bacteria and legumes plant

(A)	(B)
1. The relation between a cat and a rat is	(c) a. causes
2. A food relationship between two organisms benefit from each other	(b) elephantiasis disease
3. Falaria worm	(a) b. mutualism c. predation

📖 Mention the relationship between

- 1) lion and deer **predation**
- 2) nodular bacteria and bean plant **mutualism**
- 3) sponge and tiny aquatic living organisms **commensalism**
- 4) Bilharizia worm and man **(parasitism)**
- 5) fungi and dead organisms **(saprophytism)**
- 6) bread mold fungus **(saprophytism)**

## Science 5<sup>th</sup> primary final revision



قم بفتح كاميرا الموبايل أمام  
اللوكود تصل لشاشة فوراً على  
اليوتيوب

### **1) Complete:**

- 1- ..... is the main source of light on earth.
- 2- The kerosene lamp is an example of ..... source of light.
- 3- ..... is a phenomenon results from the traveling of light in straight lines.
- 4- The idea of ..... depends on the formation of images through narrow holes
- 5- The ..... object to the light source, the bigger the shadow
- 6- ..... and ..... are translucent materials.
- 7- When you look to yourself in the mirror, you will find that the distance between your body and the mirror is ..... to the distance between your image and the mirror.
- 8- When light falls on a paper, light is ..... and .....
- 9- Light ..... when it passes from one transparent medium to another due to change in .....
- 10- The color of the transparent and translucent objects is the same color of the ..... through them.
- 11- Colored opaque objects absorb ..... and ..... their own color.
- 12- White objects ..... all light colors while black objects ..... all light colors.
- 13- There are two types of magnets: ..... and ..... magnets.
- 14- ..... and ..... are shapes of artificial magnets.
- 15- Like poles of magnets ..... while unlike poles .....
- 16- The area surrounding a magnet is called .....
- 17- The greatest magnetic force occurs at the .....
- 18- The basic idea in making ..... is that the magnetized needle refers to the north direction.
- 19- The compass pointer is a ..... magnet that can spin .....

20-..... generates electric energy from mechanical energy.

21- Electromagnet converts.....energy into ..... energy.

22- We can increase the magnetic force in the electromagnet by .....  
.....or.....

23- We can increase the strength of the dynamo by.....  
.....or.....

24-.....and.....are devices containing an electromagnet.

25- The properties of mixture are:

- a] The components of mixture don't..... together and can be.....easily.
- b] Each component keeps its own .....
- c] The components of the mixture can be mixed in .....

26- ..... , ..... and .....  
are methods of mixing , while ..... , .....  
and ..... are methods of separation of mixtures.

27- Baking soda is ..... while blood is a .....

28- The separating funnel is used to separate ..... liquid mixtures.

29- Drosera is an example of.....plants.

30-..... , ..... and ..... are types of symbiosis.

31-Some living organisms undergo ..... or .....  
as a way of self-defense.

32-Bread mold fungus is an example of .....

## **2) Write the scientific term:**

- 1- The light energy that can be seen. ( .....
- 2- The material which things behind are less clearly seen. ( .....
- 3- The reflection of light when it falls on smooth, bright, and plane surface. ( .....
- 4- A property of light that makes us sees objects. ( .....
- 5- The change in direction of light that is caused by the traveling of light from one medium to another. ( .....

6- Bouncing of light rays when it falls on an object. (.....)

7- The iron ores which are known as magnetite. (.....)

8- The space around the magnet in which the effect of magnetic force appears. (.....)

9- The ability of the magnet to attract magnetic materials in its field. (.....)

10- A device used to light the bicycle lamp. (.....)

11- An apparatus in which mechanical energy is converted to electric energy. (.....)

12- The substance that is made of only one type of identical particles. (.....)

13- A type of matter which consists of more than one type of particles. (.....)

14- The mixture in which the components can't be distinguished. (.....)

15- The mixture in which the components can be distinguished. (.....)

16- The food relationship between 2 living organisms, in which one living organism devours another one. (.....)

17- The food relationship between 2 living organisms, in which one living organism benefits while the other is harmed. (.....)

18- The food relationship in which living organisms get their food by decomposing food remains or dead bodies. (.....)

19- Living organism that causes weakness to the host. (.....)

20- Living organisms which feed on the dead bodies. (.....)

21- The phenomenon in which living organism simulates the surrounding environment to protect itself from enemies. (.....)

22- The phenomenon in which harmless living organism imitates other harmful living organism to protect itself from enemies. (.....)

23- The food relationship between 2 living organisms, in which both of them get benefits from each other. (.....)

24- The food relationship between 2 living organisms, in which one living organism gets benefits and the other neither benefits nor is harmed. (.....)

### **3) Give reason for:**

- 1- Moon appears shiny.  
.....
- 2- A clear glass sheet is a transparent material.  
.....
- 3- A raft paper is a translucent material.  
.....
- 4- Aluminum foil is an opaque material.  
.....
- 5- Shadows are seen during daylight.  
.....
- 6- You can see yourself in a mirror.  
.....
- 7- A spoon appears broken when it is placed in a cup of water.  
.....
- 8- Sometimes you can see a rainbow in the sky.  
.....
- 9- Light spectrum is formed.  
.....
- 10- A blue glass sheet is seen blue when light falls on it.  
.....
- 11- Sometimes an apple is seen yellow  
.....
- 12- When you look at a red apple through a green glass sheet, it seems black.  
.....
- 14- We see a blackboard as it is.  
.....
- 15- Copper is a non-magnetic material, while cobalt is a magnetic material.  
.....
- 16- If we approach a magnet to iron filings, they are attracted at the two poles.  
.....
- 17- We use the compass to detect the main four directions.  
.....
- 17- A wrought iron nail attracts iron filings when a copper wire connected to an electric current is coiled around it.  
.....
- 18- Compass needle deflects when electric current passes through a wire near it.  
.....
- 19- In an electromagnet, we must increase the number of batteries.  
.....

.....

20- An iron car lifted by an electromagnet, falls down by cutting the electric current going through the coil of the electromagnet.

.....

21- The bicycle's dynamo touches the bicycle's wheel tire.

.....

22- Huge dynamo is used in electric power stations.

.....

23- In a dynamo, we increase the number of the coil turns.

.....

24- Dynamo changes kinetic energy into electric energy.

.....

25- Milk is considered a mixture,

.....

26- Distilled water is a pure substance, while mineral water is a mixture.

.....

27- We can get salt from sea water.

.....

28- Sand & water mixture is different from salt & water mixture .

.....

29- Some mixtures can be separated by using separating funnel.

.....

30- Predation is less common in plant world than in animal world.

.....

31- Plants are known as autotrophic organisms.

.....

32- Drosera is an insectivorous plant.

.....

33- Some frogs have the ability to camouflage.

.....

34- A butterfly stands on a tree with the similar color.

.....

35- There is mutualism relationship between nodular bacteria & leguminous plants.

.....

36- Saprophytic organisms are decomposers.

.....

37- Bread mold fungus is a saprophyte.

.....

38- Parasitism relationship differs from predation relationship.

.....

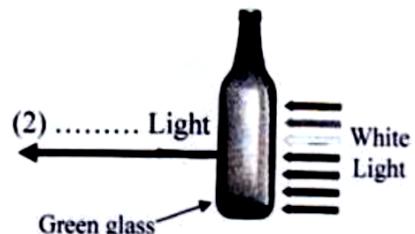
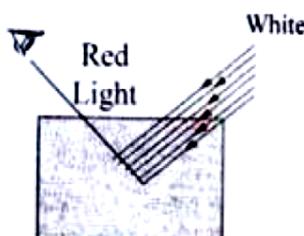
39- The host's death is considered a loss to the parasite.

.....  
40- Bilharzia worm is considered a parasite.

.....  
41- Parasitism causes weakness to the host.

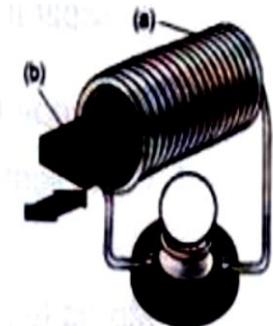
#### **4) Answer the following:**

**what is the color of each object?**



1- Write the name of parts (a) , (b) .

Part (a) is ..... and part (b) is .....

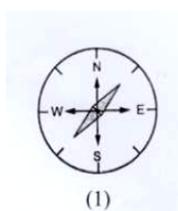


2- What happens when we move (b) inside (a) When we do that , an ..... is generated in the twisted wire ,and the small light bulls

**a-What is the name of each of the following :**

1) .....

2) .....



## **5)What happens when ?**

- 1- You put an opaque object between a lightened torch and the wall.  
.....
- 2- You look at a street through a translucent window.  
.....
- 3- You look at a lightened candle through three screens with centered holes in one straight line.  
.....
- 4- Yellow light falls on black object.  
.....
- 5- Mixing green and blue lights.  
.....
- 6- You approach a magnet to cobalt and chalk mixture.  
.....
- 7- A magnet is hanged to move freely.  
.....
- 8- You sprinkle some iron filings on a paper sheet which has a strong magnet under it.....
- 9- An electric current passes through a coiled wire around wrought iron bar.  
.....
- 10- You put the copper wire which is connected with ammeter (to measure the electric current intensity) between the two poles of magnet.  
.....
- 11- You shake an amount of sugar with water.  
.....
- 12- You heat salty water.  
.....

13- Some types of frogs are attacked by enemies.

.....

14-A cuttlefish is attacked by enemies.

.....

15-There are no nodular bacteria in the roots of leguminous plants as beans.

.....

16- You splash some water drops on a slice of bread, put it in a closed bag and leave it for a few days in the dark.

.....

17-Saprophytes disappear from earth.

.....

### **6)Mention :**

1- Properties of mixture.

.....

2- Properties of light.

.....

3- The difference between regular and irregular reflection.

.....

5- The idea of the camera.

.....

6- The difference between parasite and host.

.....

### **4-How can you separate:**

1-Iron and salt: .....

2-Sugar solution: .....

3-Oil and water: .....

4-Sand and water: .....

5-Sand and salt.....

6- Paper clips and flour: .....

7- Chalk and water: .....

## **Model answer**

### **1) Complete:**

- 1- Sun is the main source of light on earth.
- 2- The kerosene lamp is an example of artificial source of light.
- 3- Shadow is a phenomenon results from the traveling of light in straight lines.
- 4- The idea of pinhole camera depends on the formation of images through narrow holes.
- 5- The nearer the object to the light source, the bigger the shadow becomes.
- 6- tissue paper and frosted glass are translucent materials.
- 7- When you look to yourself in the mirror, you will find that the distance between your body and the mirror is equal to the distance between your image and the mirror.
- 8-When light falls on a paper, light is reflected and scattered in different directions.
- 9- Light refracts when it passes from one transparent medium to another due to change in light speed.
- 10- The color of the transparent and translucent objects is the same color of the light transmitted through them.
- 11- Colored opaque objects absorb all light colors and reflect their own color.
- 12- White objects reflect all light colors while black objects absorb all light colors.
- 13- There are two types of magnets: natural and artificial magnets.
- 14- Ring magnet, horse-shoe magnet and bar magnet are shapes of artificial magnets.
- 15- Like poles of magnets repel while unlike poles attract.
- 16- The area surrounding a magnet is called magnetic field.
- 17- The greatest magnetic force occurs at the 2 magnetic poles.
- 18- The basic idea in making the compass is that the magnetized needle refers to the north direction.
- 19- The compass pointer is a small and light magnet that can spin freely.
- 20- Dynamo (Electric generator) generates electric energy from mechanical

energy.

21- Electromagnet converts electric energy into magnetic energy.

22- We can increase the magnetic force in the electromagnet by increasing the number of coil turns or increasing the intensity of electric current by using more batteries.

23- We can increase the strength of the dynamo by increasing the number of coil turns or by using a strong magnet.

24- Electric bell and electric mixer are devices containing an electromagnet.

25- The properties of mixture are:

- a] The components of mixture don't react together can be separated easily.
- b] Each component keeps its own properties.
- c] The components of the mixture can be mixed in any amounts (any ratio).

26- Shaking, grinding and stirring are methods of mixing, while evaporation, filtration and magnetic attraction are methods of separation of mixtures.

27- Baking soda is pure substance while blood is a mixture.

28- The separating funnel is used to separate heterogeneous liquid mixtures.

29- Drosera is an example of insectivorous plants.

30- Mutualism, commensalism and parasitism are types of symbiosis.

31- Some living organisms undergo camouflage or mimicry as a way of self-defense.

32- Bread mold fungus is an example of saprophytes (saprophytic organisms/ or decomposers).

## 2) Write the scientific term:

- 1- The light energy that can be seen. (Visible spectrum)
- 2- The material which things behind are less clearly seen. (Translucent / semi-transparent material)
- 3- The reflection of light when it falls on smooth, bright and plane surface. (Regular reflection)
- 4- A property of light that makes us see objects. (Light reflection)
- 5- The change in direction of light that is caused by the traveling of light from one medium to another. (Light refraction)
- 6- Bouncing of light rays when it falls on an object. (Light reflection)

7- The iron ores which are known as magnetite. (Natural magnet)

8- The space around the magnet in which the effect of magnetic force appears. (Magnetic field)

9- Ability of the magnet to attract magnetic materials in its field. (Magnetic force/ Magnetism)

10- A device used to light the bicycle lamp. (Dynamo)

11- An apparatus in which mechanical energy is converted to electric energy. (Electric generator / dynamo)

12- The substance that is made of only one type of identical particles. (Pure substance)

13- A type of matter which consists of more than one type of particles. (Mixture)

14- The mixture in which the components can't be distinguished. (Homogeneous mixture)

15- The mixture in which the components can be distinguished. (Heterogeneous mixture)

16- The food relationship between 2 living organisms, in which one living organism devours another one. (Predation)

17- The food relationship between 2 living organisms, in which one living organism benefits while the other is harmed. (Parasitism)

18- The food relationship in which living organisms get their food by decomposing food remains or dead bodies. (Saprophytism)

19- Living organism that causes weakness to the host. (Parasite)

20- Living organisms which feed on the dead bodies. (Saprophytes or decomposers)

21- The phenomenon in which living organism simulates the surrounding environment to protect itself from enemies. (Camouflage)

22- The phenomenon in which harmless living organism imitates other harmful living organism to protect itself from enemies. (Mimicry)

23- The food relationship between 2 living organisms, in which both of them get benefits from each other. (Mutualism)

24- The food relationship between 2 living organisms, in which one living organism gets benefits and the other neither benefits nor is harmed. (Commensalism)

### 3) Give reason for:

1- Moon appears shiny.

Because moon is a dark body that reflects sunlight falling on its surface (so it becomes luminous).

2- A clear glass sheet is a transparent material.

Because things can be clearly seen behind the clear glass sheets (as it allows light to transmit through).

3- A raft paper is a translucent material.

Because things can be less clearly seen behind the tissu paper.

Aluminium foil is an opaque material.

Because it doesn't allow the light to transmit through and things behind cannot be seen.

4- Shadows are seen during daylight.

Because light travels in straight lines so when it falls on an opaque object, a shadow is formed (as light doesn't transmit through).

5- You can see yourself in a mirror.

Because the mirror is a smooth and bright surface so regular reflection happens (light is reflected in one direction).

6- A spoon appears broken when it is placed in a cup of water.

Because Light refracts when it passes between two transparent media as light changes its speed.

7- Sometimes you can see a rainbow in the sky.

Because when sunlight enters rain drops, light is separated into the 7 colors of the spectrum.

8- Light spectrum is formed.

Because when light rays enter a prism, light is separated into the 7 colors of the spectrum.

9- A blue glass sheet is seen blue when light falls on it.

Because blue glass absorbs all light colors except the blue which is transmitted.

10-Sometimes an apple is seen yellow

Because the apple absorbs all light colors except the yellow which is reflected.

11- When you look at a red apple through a green glass sheet, it seems black.

Because the green glass sheet **absorbs** the **reflected red** color from the apple and

**no color is transmitted** so apple appears black.

12- We see a blackboard as it is.

Because blackboard absorbs all light colors and reflects no color.

13- Copper is a non-magnetic material, while cobalt is a magnetic material.

Because Copper is not attracted to the magnet while cobalt is attracted to the magnet.

14- If we approach a magnet to iron filings, they are attracted at the two poles.

Because the two poles have the greatest magnetic force. (the most powerful attraction force).

15- We use the compass to detect the main four directions.

Because its magnetic needle spins freely until its north pole refers to the north geographical direction.

16- A wrought iron nail attracts iron filings when a copper wire connected to an electric current is coiled around it.

Because the electric current has a magnetic effect which changes the nail into an electromagnet.

17- The compass needle deflects when electric current passes through a wire near it.

Because the electric current has a magnetic effect.

18- In an electromagnet, we must increase the number of batteries.

To increase the **magnetic force** of the magnet.

19- An iron car lifted by an electromagnet, falls down by cutting the electric current going through the coil of the electromagnet.

Because by cutting the electric current, the electromagnet loses its magnetism so the iron blocks falls.

20- The bicycle's dynamo touches the bicycle's wheel tire.

Because as the bicycle tire turns, the coiled wire or the magnet turns and electric current is generated to light the bicycle's lamp.

21- Huge dynamo is used in electric power stations.

To generate large amount of electricity used to light cities and factories.

22- In a dynamo, we increase the number of the coil turns.

To increase the intensity of the generated electric current.

23- Dynamo changes kinetic energy into electric energy.

Because by moving the magnet inside the coiled wire, an electric current is generated.

24- Milk is considered a mixture.

Because milk consists of more than one type of particles that are mixed in any amounts, each component keeps its properties, components don't react together and can be separated.

25- Distilled water is a pure substance, while mineral water is a mixture.

Because distilled water is made of only one type of identical particles (water), but mineral water is made up of more than one type of particles (water and minerals).

26- We can get salt from sea water.

Because by evaporation, salt is separated from seawater.

27- Sand & water mixture is different from salt & water mixture.

Because Sand and water is a heterogeneous mixture (as sand is insoluble in water) which can be separated by filtration, while salt and water mixture is homogeneous mixture (as salt is soluble in water) which can be separated by evaporation.

28- Some mixtures can be separated by using separating funnel.

Because they are **heterogeneous liquid** mixtures as water and oil mixture.

29- Predation is less common in plant world than in animal world.

Because all green plants are **autotrophic** organisms, they can make their own food by photosynthesis process.

30- Plants are known as autotrophic organisms.

Because they can make their own food by photosynthesis process.

31- Drosera is an insectivorous plant.

Because it **devours insects** to get the required elements for making **proteins**.

32- Some frogs have the ability to camouflage.

To simulate the surrounding environment and hide from their enemies.

33- A butterfly stands on a tree with the similar color.

To hide from its enemy as it simulates the environment in a phenomenon called camouflage.

34- There is mutualism relationship between nodular bacteria & leguminous plants.

Because the nodular bacteria fix nitrogen into nitrogenous substances that plant can use to make proteins, and the bacteria benefits from sugars made by plants through photosynthesis.

35- aprophytic organisms are decomposers.

Because they get their food by decomposing food remains or dead bodies.

36- Bread mold fungus is a saprophyte.

Because it gets its food by decomposing food remains of bread.

38- Parasitism relationship differs from predation relationship.

Predation	Parasitism
The <b>predator</b> devours the <b>prey</b> <u>causing its death.</u>	The <b>parasite</b> feeds on <b>host's</b> digested food <u>causing its weakness.</u>
It is a <u>temporary</u> relationship	The parasite <u>depends completely</u> on the host.
Example: lion and deer	Example: Bilharzia and man.

39- The host's death is considered a loss to the parasite.

Because the parasite depends on the host completely as the source of food & shelter.

40- Bilharzia worm is considered a parasite.

Because it depends completely on the host to get its food causing harm to the host.

41- Parasitism causes weakness to the host.

Because the parasite shares the host its digested food.

#### 4) What happens when ?

1- You put an opaque object between a lightened torch and the wall.

A shadow is formed.

2- You look at a street through a translucent window.

I will see the street less clearly.

You look at a lightened candle through three screens with centered holes in one straight line.

I will see the light of the candle's flame.

3- Yellow light falls on black object.

The object absorbs yellow light & reflects no color so it appears black.

4- Mixing green and blue lights.

Cyan color is formed.

5- You approach a magnet to cobalt and chalk mixture.

The magnet will attract the cobalt, but the chalk will not be attracted.

6- A magnet is hanged to move freely.

The magnet's north pole will point to the north geographical direction & its south pole refers to south geographical direction.

7- You sprinkle some iron filings on a paper sheet which has a strong magnet under it.

The iron filings get arranged around the magnet in a regular way which determines the shape of the magnetic field lines of the magnet.

8- An electric current passes through a coiled wire around wrought iron bar.

The wrought iron bar becomes an electromagnet and can attract magnetic materials.

9- You put the copper wire which is connected with ammeter (to measure the electric current intensity) between the two poles of magnet.

The ammeter's pointer will not deflect because the wire is not moving so no electric current is generated.

10- You shake an amount of sugar with water.

Sugar will dissolve in water forming homogeneous mixture.

11- You heat salty water.

Water will evaporate and salt will remain in the beaker.

12- Some types of frogs are attacked by enemies.

They undergo camouflage to simulate the surrounding environment and hide from enemies.

13- A cuttlefish is attacked by enemies.

It ejects black fluid in surrounding water to hide from its enemies in a phenomenon called camouflage.

14- There are no nodular bacteria in the roots of leguminous plants as beans.

The plant will not be able to fix nitrogen so will not make proteins.

15- You splash some water drops on a slice of bread, put it in a closed bag and leave it for a few days in the dark.

A dark green layer is found on bread as bread mold fungus decomposes the bread.

16- Saprophytes disappear from earth.

Earth will be covered with bodies of dead organisms.

## 5) Mention:

1- Properties of mixture.

a] The components of the mixture can be mixed in any amounts (ratio).

b] Each component keeps its own properties.

c] The components of mixture don't react together and can be separated easily.

2- Properties of light.

a) Light travels in straight lines.

b) Light reflects.

c) Light refracts.

d) Light separates into 7 spectrum colors.

3- The difference between regular and irregular reflection.

Regular reflection	Irregular reflection
--------------------	----------------------

It is the reflection of light when it falls on a smooth & bright surface.	It is the reflection of light when it falls on a rough surface.
Light rays are reflected in one direction.	Light rays are reflected & scattered in different directions due to protrusions & tiny holes.
We can see our image clearly.	We cannot see our image
Example: a mirror.	Example: A paper.

#### 4- The idea of the camera.

Formation of images by using narrow holes because light travels in straight lines.

#### 5- The difference between parasite and host.

<u>Parasite</u>	<u>Host</u>
The animal which benefits from the host (depending completely on it to get its food).  Example: Bilharzia worm	The animal which is harmed.  Example: Man

#### 4- How can you separate:

1-Iron and salt: By magnetic attraction.

2-Sugar solution: By evaporation

3-Oil and water: By using a separating funnel

4-Sand and water: By filtration

5-Sand and salt:

a) Add water to the mixture and stir, salt will dissolve in water but sand will not dissolve in water.

b) Filtration to separate sand from salty solution.

c) Evaporation to separate salt from water.

6- Paper clips and flour: By magnetic attraction

7- Chalk and water: By filtration (ch alk is insoluble in water)



قم بفتح كاميرا الموبايل أمام الكود تصل لقناتنا فوراً على اليوتيوب

# **Which process takes place faster and why ?**

- 1- Evaporation of an amount of sea water by leaving it in a beaker for several days or heating the same amount on the burner.
- 2- Grinding of solids before adding them to a liquid to dissolve or breaking them down into small pieces.
- 3- Dissolving of an amount of salt in a beaker containing 100 ml of water or the same amount of salt in 300 ml of water.

## **Choose the correct answer:**

- 1- Green plants are considered as ..... organisms  
( decomposer – producer – consumer )
- 2- An example of decomposers is .....  
( fungi – rabbits – plants )
- 3- Plants get energy from .....  
( oxygen – chlorophyll – sunlight )
- 4- The process of photosynthesis is done by .....  
(producer – consumer – decomposer )
- 5- Bilharzia worms are considered as ..... organisms  
(producer – consumer – decomposer )
- 6- Red, green and blue light are ..... lights  
(primary – secondary – complementary)
- 7- Light transmits in ..... Lines

(curved – broken – straight)

8- Most mixtures formed by dissolving in liquids are

(homogeneous – heterogeneous – identical)

9- When a magnet is hanged freely, its north pole refers to

(north – south – east )

## **Write the scientific term:**

1-The space around the magnet in which magnetic force is most powerful

2- The mixture which exists in liquid state

3- Objects having the same color of the light which the object reflects

4- A temporary relationship between two different living organisms ending by devouring one of them by other

5- A set is used for locating the four main directions

6- The natural area which including living organisms and non living things

7- Reflection of light on the surface of white paper in different directions

8- Homogenous mixtures produced from mixing different metals to each other by fusion then cooling

9- The materials which you can see objects clearly behind and in full details

10- The color we get by mixing two colors of the primary colors

11- An area of the magnet where the magnetic force is most powerful

12- Red, green and blue lights

13- The relationship between two organisms that benefit from each other

14- The interaction among the environmental components

15- A set is used to change the mechanical energy to the electric one

16- Darkened area formed behind an object once light falls on it

17- A process of heating salty solution gently to separate salt from water

18- The light energy that can be seen

19- The two ends of the magnet where the magnetic force is most

20- Materials which attracted to magnet

21- Materials which do not allow light to pass through them

22- The substance that consists of more than one type of identical particles

23- Disease caused by parasite ascaris worm

24- A balance among the components of the ecosystem

25- The main source of light on earth

26- Adding an amount of sugar to water with stirring

27- It consists of more than one type of particles

28- The light that we can get by mixing two of the primary colored lights

29- Food relationship between two living organisms where one of them benefits from the other, while the other neither gets benefit nor is harmed

30- The homogenous liquid mixture

31- The space around a magnet in which the magnetic force appears

32- The material which you can see objects clearly behind them

33- The relationship between nodular bacteria and legumes plants

34- The pole of the magnet that attracts with the north pole of the other magnet

## **Complete the following statements:**

1- Like magnetic poles ..... and dislike ones ..... each other.

2- Fungi are considered as .....

3- ..... and ..... are primary colors.

4- Electromagnet consists of ..... and .....

5- The food relationship among cat and rat is .....

6- Decomposers are considered the ..... of nature.

7- Solution is a type of .....

8- The magnetic force is most powerful at the ..... of the magnet.

9- Green plants are ..... organisms.

10- Bilharzia worm is a .....

11- The ..... Contains a small light magnet moves freely around a fixed axis.

12- The food relationship in which both organisms benefit from each other is known as .....

13- The magnet has two poles which are ..... and .....

14- Salt and water can be mixed by ..... or .....

15- In salty solution, salt is the ....., while water is the .....

16- In parasitism, the death of ..... is considered great loss to the .....

17- The best conditions to decrease the solubility time are ....., ..... and .....

### **Give reasons:**

- 1- White light can be separated.
- 2- Dynamo can change mechanical energy into electric one.

- 3- Solution is a type of mixtures.
- 4- The parasite does not kill its host.
- 5- Parasitism may be external or internal.
- 6- Some materials are magnetic.
- 7- There are different types of solutions.
- 8- Green plants can make their own food.
- 9- Some mixtures can be separated by using a separating funnel.
- 10- Predation is a temporary food relationship.
- 11- Rainbow can be seen after heavy rain falling.
- 12- Tape worm is a parasite
- 13- Formation of shadow
- 14- Iron and cobalt are attracted to the magnet
- 15- Sugar is a pure substance
- 16- The spoon appears broken when we put it in a cup of water
- 17- Aluminium foil is an opaque material
- 18- Copper is a non magnetic material
- 19- A chameleon can hide from its enemies
- 20- Saprophytic organisms are called decomposers

## **What happens when:**

- 1- A bar magnet is suspended freely from its middle
- 2- A white light falls on a red apple

- 3- Man continues cutting forest trees
- 4- Bacteria disappear completely
- 5- Predators disappear from environment
- 6- Electric current passes through a wire twisted around iron nail
- 7- Heating salty water for a long time
- 8- Mixing blue color with green color

## **What is the difference between:**

- 1- The transparent and opaque materials.
- 2- The primary and secondary colors.
- 3- The solvent and the solute.
- 4- The magnetic and non-magnetic materials.
- 5- The suspension and the colloid.
- 6- The external and internal parasites.
- 7- Parasitism and saprophytism.
- 8- The solution and the mixture.
- 9- The homogeneous and heterogeneous mixtures.
- 10- The solution and the suspension.

# Model Answer

By:Mr.Mohamed Taha

## Which process takes place faster and why ?

- 1- Evaporation of an amount of sea water by leaving it in a beaker for several days or heating the same amount on the burner.
  - Heating the same amount on the burner , because increasing temperature by the burner increases the speed of the evaporation process
- 2- Grinding of solids before adding them to a liquid to dissolve or breaking them down into small pieces.
  - Grinding of solids make them dissolve faster, because as the size of the solute particles decreases as they dissolve faster
- 3- Dissolving of an amount of salt in a beaker containing 100 ml of water or the same amount of salt in 300 ml of water.
  - Dissolving the same amount in 300 ml of water, because as the amount of solvent increases as the speed of solubility process increases

## Choose the correct answer:

1- Green plants are considered as ..... organisms

( decomposer – **producer** – consumer)

2- An example of decomposers is .....

( **fungi** – rabbits – plants )

3- Plants get energy from .....

( oxygen – chlorophyll – **sunlight** )

4- The process of photosynthesis is done by .....

(**producer** – consumer – decomposer )

5- Bilharzia worms are considered as ..... organisms

(producer – **consumer** – decomposer )

6- Red, green and blue light are ..... lights

(**primary** – secondary – complementary)

7- Light transmits in ..... Lines

(curved – broken – **straight**)

8- Most mixtures formed by dissolving in liquids are

(**homogeneous** – heterogeneous – identical)

9- When a magnet is hanged freely, its north pole refers to

(**north** – south – east )

**Write the scientific term:**

1- The space around the magnet in which magnetic force is most powerful. **Magnetic field**

2- The mixture which exists in liquid state. **Solution**

3- Objects having the same color of the light which the object reflects. **Opaque colored objects**

4- A temporary relationship between two different living organisms ending by devouring one of them by other. **Predation**

5- A set is used for locating the four main directions. **Compass**

6- The natural area which including living organisms and non living things. **Ecosystem**

7- Reflection of light on the surface of white paper in different directions. **Irregular light reflection**

8- Homogenous mixtures produced from mixing different metals to each other by fusion then cooling. **Alloys or solid solid mixture**

9- The materials which you can see objects clearly behind and in full details. **Transparent materials**

10- The color we get by mixing two colors of the primary colors. **Secondary color**

11- An area of the magnet where the magnetic force is most powerful. **Two poles**

12- Red, green and blue lights. **Primary colored lights**

13- The relationship between two organisms that benefit from each other. **Mutualism**

14- The interaction among the environmental components. **Environmental balance**

15- A set is used to change the mechanical energy to the electric one. **Dynamo**

16- Darkened area formed behind an object once light falls on it. **Shadow**

17- A process of heating salty solution gently to separate salt from water. **Evaporation**

18- The light energy that can be seen. **Visible spectrum**

19- The two ends of the magnet where the magnetic force is most. **Two poles**

20- Materials which attracted to magnet. **Magnetic materials**

21- Materials which do not allow light to pass through them. **Opaque materials**

22- The substance that consists of more than one type of identical particles. **mixture**

23- Disease caused by parasite ascaris worm. Anaemia

24- A balance among the components of the ecosystem. Environmental balance

25- The main source of light on earth. Sun

26- Adding an amount of sugar to water with stirring. Solubility process

27- It consists of more than one type of particles. Mixture

28- The light that we can get by mixing two of the primary colored lights. Secondary colored light

29- Food relationship between two living organisms where one of them benefits from the other, while the other neither gets benefit nor is harmed. Commensalism

30- The homogenous liquid mixture. Solution

31- The space around a magnet in which the magnetic force appears. Magnetic field

32- The material which you can see objects clearly behind them. Transparent materials

33- The relationship between nodular bacteria and legumes plants. Mutualism

34- The pole of the magnet that attracts with the north pole of the other magnet. South pole

## Complete the following statements:

- 1- Like magnetic poles repel and dislike ones attract each other.
- 2- Fungi are considered as decomposers
- 3- red, green and blue are primary colors.
- 4- Electromagnet consists of battery and copper coil twisted around wrought iron
- 5- The food relationship among cat and rat is predation
- 6- Decomposers are considered the guards (Scavengers) of nature.
- 7- Solution is a type of mixtures
- 8- The magnetic force is most powerful at the two poles of the magnet.
- 9- Green plants are producer (autotrophic) organisms.

10- Bilharzia worm is a **parasite**

11- The **compass** Contains a small light magnet moves freely around a fixed axis.

12- The food relationship in which both organisms benefit from each other is known as **mutualism**

13- The magnet has two poles which are **north** and **south**

14- Salt and water can be mixed by **stirring** or **shaking**

15- In salty solution, salt is the **solute** while water is the **solvent**

16- In parasitism, the death of **the host** is considered great loss to the **parasite**

17- The best conditions to decrease the solubility time are **stirring** **increasing the temperature** and **increasing the quantity of solvent**

## **Give reasons:**

1- White light can be separated.

**Because it consists of seven spectrum colors**

2- Dynamo can change mechanical energy into electric one.

**Due to moving of a magnet inside a coil of wire since, the magnet has an electric effect.**

3- Solution is a type of mixtures.

**Because it consists of more than one type of identical particles**

4- The parasite does not kill its host.

**Because the host is the source of food and shelter for the parasite.**

5- Parasitism may be external or internal.

**Because some parasites suck the blood of the host externally, while others live and feed within the body of the host.**

6- Some materials are magnetic.

**Because they are attracted to the magnet**

7- There are different types of solutions.

**Because some solutions are homogenous mixtures, while others are heterogeneous mixtures like suspension.**

8- Green plants can make their own food.

**Because they are autotrophic organisms since, they carry out photosynthesis process.**

9- Some mixtures can be separated by using a separating funnel.

**Because separating funnel is used to separate the heterogeneous liquid mixtures like water-oil mixture.**

10- Predation is a temporary food relationship.

**Because it ends with the devouring of the prey**

11- Rainbow can be seen after heavy rain falling.

**Due to the splitting of white light into seven spectrum colors.**

12- Tape worm is a parasite.

**Because it lives inside the host body and shares its digested food.**

13- Formation of shadow

**Because light travels in straight lines**

14- Iron and cobalt are attracted to the magnet

**Because they are magnetic substances**

15- Sugar is a pure substance

**Because it consists of only one type of identical particles**

16- The spoon appears broken when we put it in a cup of water

**Due to the refraction of light**

17- Aluminum foil is an opaque material

**Because it does not allow light to pass through and objects cannot be seen behind it.**

18- Copper is a non magnetic material

**Because it is not attracted to the magnet.**

19- A chameleon can hide from its enemies

**Because it can change its color according to the color of the surrounding environment.**

20- Saprophytic organisms are called decomposers.

**Because they feed on and decompose the remains of food and the bodies of dead organisms.**

## **What happens when:**

1- A bar magnet is suspended freely from its middle.

**It takes a certain direction points to north and south direction.**

2- A white light falls on a red apple

**The apple absorbs all white colors and reflects only the red color.**

3- Man continues cutting forest trees.

**It leads to the disturbance of the the environmental balance.**

4- Bacteria disappear completely.

**The environment will not get rid of the bodies of dead organisms .**

5- Predators disappear from environment.

**The number of preys increases and a competition appears on the sources of food**

6- Electric current passes through a wire twisted around iron nail.

**Electromagnet is produced.**

7- Heating salty water for a long time.

**Salty water will be separated by evaporation since, water evaporates while salt rests.**

8- Mixing blue color with green color.

**Cyan color is produced.**

# What is the difference between:

1- The transparent and opaque materials.

Transparent materials allow light to pass through them and objects can be seen clearly behind them.

Opaque materials do not allow light to pass through them and objects can not be seen behind them.

2- The primary and secondary colors.

Primary colors can not be produced from mixing any other colored lights.

Secondary colors can be produced by mixing two of the primary colored lights.

3- The solvent and the solute.

Solvent is the substance in which the solute disappears, while solute is the substance that dissolves in the solvent.

4- The magnetic and non-magnetic materials.

Magnetic substances are attracted to the magnet like iron, cobalt and nickel

Non magnetic substances are not attracted to the magnet like copper, plastic and wood

5- The suspension and the colloid.

Suspension is a heterogeneous mixture that its particles can be distinguished easily by the naked eye.

Colloid is a homogenous mixture that its particles can not be distinguished by the naked eye.

6- The external and internal parasites.

External parasites live externally on the host's body and feed by sucking the host's blood.

Internal parasites live inside the host's body and feed by sharing the host its digested food or its cells and tissues.

7- Parasitism and saprophytism.

**Parasitism is a food relationship in which one living organism called parasite benefits from another one, while the other called host and it is harmed.**

**Saprophytism is a food relationship in which saprophytes decompose the remains of food or the bodies of dead organisms.**

8- The solution and the mixture.

**Solution is a homogeneous mixture consists of solvent and solute.**

**Mixture is a substance that consists of more than one type of identical particles.**

9- The homogeneous and heterogeneous mixtures.

**Homogenous mixture: its particles can not be distinguished by the naked eye.**

**Heterogenous mixture: its components can be distinguished easily by the eye.**

10- The solution and the suspension.

**Solution is a homogenous mixture , while the suspension is a heterogeneous mixture.**

تمنياتى لجميع أبنائى وبناتى دوام التفوق

*Mr. Mohamed Taha*

# Primary (5)

# Revision sheet



## **Q.1: Complete the following:**

- 1- ----- is a form of energy that can be seen.
- 2-the moon's surface ----- the sun light.
- 3-light travels in a ----- lines.
- 4-the idea of the photographic camera depends on -----
- 5-the nearer the object to light source is the ----- the shadow of this object.
- 6-the kind of material that covers windows of darkened photographic room is -----
- 7-There are two types of reflection: ----- and ----- reflection.
- 8-the light energy that can be seen is called -----
- 9-Secondary colors are produced as a result of -----
- 10-the opaque colored objects seems having the same color of light which -----
- 11-When you hold a magnet freely, one of its poles is directed to ----- and the other to -----
- 12- The magnetic force of the electromagnet can be increased by: ----- and -----
- 13-the scientist who discovered the idea of dynamo working is called -----
- 14-Mixtures are formed by -----, ----- or -----
- 15-Gold alloys are composed of -----, ----- and -----
- 16----- is a common solvent for most substances.
- 17-Increasing stirring ----- the time of solubility process.
- 18-Food relationships among living organisms are -----, -----, ----- and -----
- 19-Ways of self-defense against predation are ----- and -----
- 20-Examples of saprophytes: -----, ----- and -----
- 21-The parasitism is a relationship between ----- and -----

# Revision



Science Section

## Complete:

- 1-Light can easily transmit through.....and.....materials.
- 2-The like poles.....each other, while the unlike poles.....each other.
- 3-There are two types of commensalism which are.....and.....
- 4-The ecosystem is a.....area that contains.....and.....
- 5-Electric current has.....effect.
- 6-The spectrum colors start with.....color and ends with.....color.
- 7-Materials are classified according to their ability of magnetization into.....and.....materials.
- 8-Vinegar and water is.....mixture, while sand and water is.....mixture.
- 9-Predation is less common in.....world than in.....world.
- 10-.....and.....are from the magnetic materials.
- 11-.....plants have to prey some insects to get their needed elements for making.....substances.
- 12-Mixtures can be formed by....., .....and.....
- 13-.....and.....are examples of pure substances.
- 14-Examples of saprophytes include some fungi such as....., .....and.....
- 15-Materials can be classified according to their ability to transmit light into....., .....and.....materials.
- 16-The English scientist.....made a magnetized needle which is used nowadays in making.....
- 17-.....and.....are from the ways of self-defense against predation in living organisms.
- 18-The electric current produced by the electric generator (dynamo) increases by.....or.....

19-Liver worms ,..... and.....are from parasites that live internally inside the host's body.

20-The electromagnet consists of..... , .....and.....

21-Camouflage phenomenon is found in some living organisms such as birds,... .....and.....

22-.....process is used to separate a soluble salt from its solution.

23-Predators help preys to get rid of.....or.....members.

24-The image of an object that is formed through a narrow hole is.....

25-The apparatus that converts kinetic energy into electric energy is called.....

26-.....is used to separate water-oil mixture.

27-The glass prism is used to separate the.....light into seven colors called.....

28-Components of a mixture can be separated by..... , .....or.....

29-In parasitism relationship, the death of the .....is considered a loss to the.....

30-The presence of.....and.....are factors necessary for light reflection.

31-Plants that feed on some insects are known as .....plants, such as.....plant and.....plant

32-.....converts the electrical energy into magnetic energy, while dynamo converts.....energy into.....energy

33-Nodular bacteria provides the bean plant with.....by fixing it on the plant in an.....form

34-The magnet has the most powerful of attraction at its .....

35-..... , .....and.....are from parasites that live externally on the host's body.

36-The components of ecosystem are.....and.....

37-In the....., the light rays reflected directly in one direction.

## Give reasons

**1) A spoon appears broken when it is placed in a cup of water .**

Due to light refraction

**2) Iron, cobalt and nickel are magnetic materials.**

Because they are attracted to the magnet

**3) A magnet can be used to separate iron filings from sand.**

Because iron filings attracted to the magnet.

**4) Aluminum foil is an opaque material.**

Because there is no light passes through it.

**5)some mixtures can be separated by using the separating funnel.**

Because separating funnel is used to separate heterogeneous mixtures.

**6) Shadow of an opaque objects is formed when light falls on it .**

Because light travels in a straight lines.

**7) Mineral water is considered a mixture .**

Because it contains more than one type of particles, they are calcium and magnesium .

**8) Some plants are called (insectivorous plants).**

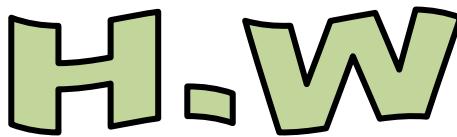
Because they depends on predation process to get some compounds from the soil such as nitrogen.

**9) The formation of light spectrum.**

Due to light separation.

**10) Both North Pole of the magnet attracts the south pole of another magnet, but the North Pole repels another north.**

Because dislike (different) poles attract and like poles repel.



## **Write the scientific term:**

- 1) The food relationship in which the organism gets its food by decomposing the bodies of dead organisms. (-----)
- 2) A mixture contains water, calcium and magnesium. (-----)
- 3) An instrument used in the electric power stations. (-----)
- 4) A beautiful phenomenon occurs in the sky after raining during a sunny day. (-----)
- 5) A device used to lift several tons of iron. (Electromagnet)

## **Put( ✓ ) or ( ✗ ):**

- 1) The first spectrum color is orange. ( )
- 2) In the dynamo the magnetic energy is changed into electric energy. ( ✗ )  
In the dynamo the kinetic energy is changed into electric energy
- 3) When light is passes from air to glass , it reflects. ( )
- 4) Evaporation is used to separate oil and water. ( )
- 5) Lions, tigers and sharks are predators. ( )
- 6) The formation of shadow indicates that light travels in curved lines. ( )

**Note: don't forget to send the sheet back to your teacher  
to correct and write your name on it.**

① Give reasons for the following:

1. Plants are the main food for lions, although lions are carnivorous

Because lions feed on animals (as deers) which feed on green plants.

2. Tape worm is a parasite

Because it lives inside man to get food and man is harmed.

3. Water is a common Solvent

Because thousands of solid materials dissolve in it.

4. Mutualism exists between nodular bacteria and leguminous plants.

Because nodular bacteria provides the leguminous plants with nitrogen in an inorganic form, while the leguminous plants provide the bacteria with sugar.

5. When Sunlight falls on a white paper, it appears white

5. Chalk appears white.

Because the white opaque objects (chalk) reflect all light colours.

6. Table Salt can be collected from the sea

Due to the evaporation process which is used to separate solid materials that are soluble in water, like salt in the sea water.



التاريخ

G.R.

موضوع الدرس:

7- You can see your image in the mirror

- Due to the regular reflection of light.

8- Iron is considered from the magnetic materials.

- Because it is attracted to the magnet.

9- Some bees look like wasps in forming lines on their bodies.

To fear their enemies and escape from them by mimicry phenomenon.

10- Electromagnet is considered a temporary magnet.

Because it changes the electric energy into magnetic energy.

11. the magnet attracts metallic paper clips, but doesn't attract copper wire.

Because paper clips is a magnetic material, while Copper wire is a non-magnetic material

12. Sugar is considered as pure substance.

Because sugar consists of only one type of identical particles.

13. The formation of images through narrow holes. (pinholes) Formation of shadow.

- Due to the travelling of light in straight lines.

13- the image formed through narrow hole (pinholes) is inverted.

((The same answer))

نفس الاجابة

MITKEES



G.R.

التاريخ or a spoon

موضوع الدرس:

14. (The pen) appears broken in a glass of water

Due to the refraction of light.

(or) Tomato sauce / solution is a type of mixture

15. (Air) is a mixture

Because it consists of more than one type of particles such as nitrogen gas, oxygen gas, carbon dioxide gas and water vapour.

16. We can see black object as it is.

Because this object absorbs all light colours and doesn't reflect any colour, so it appears black.

or Aluminium

17. (Copper) is a non-magnetic material

Because it is not attracted to the magnet.

18. Some living organisms can make mimicry.

To fear their enemies and escape from them.

19. Wood is an opaque object

Because opaque material doesn't allow light to pass through.

20. Cobalt is a magnetic material

Because it is attracted to the magnet.

21. Compass is used to identify the four geographical directions.

Because its north pole refers to the north direction of the Earth and its south pole refers to the south direction of the Earth.



التاريخ:

G.R.

موضوع الدرس:

22. We must wear dark clothes in winter.

Because dark clothes absorb all light colours that fall on them causing the feeling of warmth.

23. Predation is less common in plant world than in animal world.

Because plants are autotrophic organisms that can make their own food by photosynthesis

24. It is possible to separate iron filings from sand by using magnetic attraction.

Because magnet attracts the iron filings and separates them from the mixture

25. We see a picture behind the glass clearly.

Because glass is transparent material which allow most light to pass through.

26. The moon seems luminous although it is a dark body.

Because it reflects the sunlight that falls on its surface.

27. The red apple seems red when sunlight falls on it.

Because the apple fruit absorbs all light colours and reflects the red colour only.



التاريخ: G.R.

موضوع الدرس:

## 2.8- Decomposers are considered the guards of nature.

Because they help the environment in getting rid of bodies of the dead organisms and recycling the chemical elements found in the bodies of dead organisms to the environment to make other organisms benefit from them.

### ② Complete

- ① The material which allows most light to transmit through is called ... **1. transparent material**
- ② Light can easily be transmitted through ... and ... materials. **2. transparent-translucent**
- ③ The change in the direction of light rays when they pass through the separating surface between two different transparent media is called ... **3. light refraction**  
white light consists of 7 colours, which are called - - - ↓
- ④ The prism separates the sunlight into ... **4. seven (spectrum colours)**
- ⑤ Objects have the same colour of light which transmitted through. **5. transparent and translucent**
- ⑥ Objects seem having the same colour of light that they reflect. **6. opaque**



## ② Complete

7 If the red light strikes a white ball, 7- red  
the ball looks in ... colour.

8 Red light + Green light + Blue light =

9 The magnetic pole that always refers to the north direction of the Earth is called

10 The magnetic force is most powerful 10. two poles at the ... of magnet.

11 the like poles ... each other, whereas 11. repel

the dislike poles ... each other.

12 The ... is the space surrounding a magnet 12. magnetic in which a magnetic force appears. field.

13 The ... consists of a small light magnet 13. magnetic moves freely around a fixed axis. compass

14 When an electric current flows through 14. electromagnet a wire twisted (winding) around a wrought iron nail, the nail becomes an ...

15 The basic idea of working of the electromagnet is the changing of ... energy into ... energy.

15. electric magnetic

16 The electric current produced by the electric generator (dynamo) increases 16- using a strong magnet-increasing by ... or ... get increased. the number of turns in the moving coil.

17 The apparatus that converts <sup>changes</sup> Kinetic energy into electric energy is called ...

17. the dynamo

electric generator



## 2. Complete

موضوع الدرس

18. is considered to be a general <sup>common</sup> Solvent, 18- water because of its ability to dissolve most materials.

19. Mixing a small amount of mud with water forms ... that can be separated by ... 19- mixture - filtration process

20. Increasing the quantity of solvent, the solubility time when using the same amount of solute. 20- decreases

21. Increasing ... , reduces the solubility time. 21. the temperature

22. Increasing temperature, the solubility time when using the same amount of Solvent and solute. 22. decreases

23. The interaction between a cat and a rat is considered as an example of ... relationship. 23. Predation

Bilharzia worms parasitize on man

24. Bilharzia worm hurts ..., so it is called 24. the host's body ..., while the organisms that are hurted - internal parasite called hosts.

25. Fungi are considered as ... living organisms. 25. Saprophytic

26. The relationship between fungi and dead 26. Saprophytism organisms is an example of ...

27. Solubility process needs the presence of 27. Solute - Solvent and ...

28. Dorsera plant prey ... to get required elements for making ...

29. Filaria worm causes ... diseases, but infects man with malaria disease.

**Ascaris** worm cause **MITKES** anaemia disease.

28. Insects - protein



29. Elephantiasis - mosquitoes

## التاريخ 2. Complete

موضوع الدرس

30. light travels in ... lines and make shadow, when meeting ... bodies.

31. Natural magnet is one of the ..., which is known as ..., and it is a black coloured rock - magnetite

32. Aluminium, chalk and wood are ... materials, while nickel and cobalt are ... materials.

33. is the solid substance that dissolves in a solvent.

33. is the natural area which includes living organisms and non-living things.

34. Tape worm is an ... parasite, while ... is an external parasite.

35. ..., orange, ..., green, blue, ... and violet are the seven spectrum colours.

36. The banana fruit seems yellow, because it ... all colour lights and ... yellow light reflects.

37. ... is the organism which clean the Earth from dead bodies.

38. Mixture can be formed by ... or grinding

39. Examples of **opaque materials** are ... and ...

40. Liquid materials can be mixed together by ... or ...

41. ... convey **plague** to man.

42. The spectrum colours start with ... and end with ...

43. Mixing ... and ... coloured lights gives yellow colour.

30. straight- opaque.

31. Iron ores -

32. non-magnetic - magnetic

33. the Solute

33. Ecosystem

34. Internal- mosquito

35. Red-yellow- indigo

36. absorbs- reflects.

37. Saprophytes

38. stirring

39. rocks- wood

40. Shaking- stirring

41. Fleas

42. Red- violet

43. red- green

## 2. Complete

44. Iron filings and sand can be separated by magnetic attraction, while sand and water can be separated by filtration process.

45. A liquid mixture formed of a solute and a solvent is called solution.

46. Vinegar and water is liquid-liquid mixture, while sand and water is solid-liquid mixture.

47. Red, green and blue lights are called primary coloured lights.

48. The electromagnet consists of bar of soft iron, battery, a twisted copper wire coiling around the bar of iron.

49. The solution consists of solute and solvent.

50. The relationship between sponge and tiny aquatic living organisms is commensalism.

51. Matter can be divided into magnetic materials and non-magnetic materials due to their magnetic ability.

52. The process by which a solute dissolves in a solvent is solubility process.

53. A butterfly uses camouflage as it stands on a tree with a similar colour.

54. Green plants are producers.

55. The mineral water is an example of mixture which consists of water and minerals.

56. Ecosystem may be small as a water pond or a forest or large as an area of land.

## 2. Complete

57. the coil of a dynamo is made up of **57-copper** wire

58. solvent + solute Solubility

59. The speed of solubility <sup>process</sup> by increasing stirring process

60. light speed through air is... than that **60-faster** through water.

61. **Dynamo** consists of ... and ...

62. Mixing ... and ... lights gives cyan light **62-blue-green**

63. Food relationship in which both organisms benefit from each other is ...

64. Some human activities as ... leads to destroy environmental balance. **64. Cutting down trees**

65. We can see the ... when sunlight passes through water droplets during rain falling. **65-Rainbow**

66. the darkened area behind opaque bodies is called **66-Shadow**

67. Red light + blue light = ... **67-magenta light**

68. The light ... when it transfers between two transparent media. **68-refracts**

69. Increasing the number of (coil turns) increases ... of the electromagnet **69-the magnetic force**

70. On mixing two primary light colours, a light colour is produced. **70-secondary**

71. Food relationship between bean plant and bacteria is ...

**58. Solution**

**59-increases**

**61. a copper coil**  
**-a magnet**

**62. blue-green**

**63. mutualism**

**64. cutting down trees**

**65. Rainbow**

**66. Shadow**

**67. magenta light**

**68-refracts**

**69-the magnetic force**

**70-secondary**

**71. mutualism**



## 2. Complete

72. and are ways of forming solid mixtures such as salt and pepper.

72. **shaking** - **grinding**

73. Green light colour + blue light colour =

73. **Cyan light colour**

74. is used to separate immiscible liquid mixtures (as) oil from water

74. **Separating funnel.**

③ write the scientific term of each of the following

① It is the light energy that can be seen

the **Define**  
1. **Visible spectrum**

② A darkened area formed when light falls on an opaque object

2. **Shadow Define**

③ The materials which you can see objects clearly behind them and in full details

3. **transparent materials**

④ The material that doesn't allow light to travel through it and objects can't be seen through.

4. **opaque material**

⑤ The reflection of light on a piece of white paper in different directions

5. **Irregular Light reflection**

⑥ The change in the direction of light rays when light passes from a transparent medium to another transparent medium.

6. **Light refraction Define**

⑦ The seven colours of light which sunlight spectrum is made up of.

**(white light) colours**



What is meant by = define =  
Explain the concepts

12

Write the

③ Scientific term

موضع الدرس:

⑧ A light results from mixing seven  
Spectrum colours / Visible spectrum is made up of 7 colours

8. The White Light

⑨ The light that we can get by mixing  
two of the primary coloured lights.

9. Secondary  
coloured light.

⑩ The materials that are attracted  
to the magnet.

10. magnetic  
materials

⑪ The materials that are not attracted to  
the magnet.

11. Non-magnetic  
materials

⑫ The regions (two ends) of the magnet,  
where the magnetic force is most powerful

12. the magnetic  
poles

⑬ the space around a magnet in  
which the magnetic force appears.

13. The magnetic  
field.

⑭ A set that is used for locating the main  
four geographical directions

14. the magnetic  
compass

⑮ A set that is used to change mechanical  
energy into electric energy.

15. the dynamo

⑯ A mixture produced by dissolving carbon  
dioxide gas in sugary solution

16. Soda water

⑰ Leaving some sea water exposed to  
sun rays for many days.

17. Evaporation  
process

⑱ Heating a salty solution gently.

18. Evaporation  
process

⑲ the temporary food relationship that  
ends by devouring the prey or a part (of) it

19. predation  
define

between two different living organisms that benefits (one) and harms  
the other

⑳ The food relationship between two organisms  
that benefit from each other.

20. Mutualism  
Define

MITKEES

What (is) meant by = Define (define mixture) 25-13

3. Write the scientific term.

21 The food relationship, in which one organism benefits from the other and the other neither gets benefit nor is harmed. 21. **Commensalism**

22 Red, green and blue light colours

23 yellow, <sup>magenta</sup> and cyan light colours

Define

22. Primary Coloured lights

23. Secondary coloured lights

24. Coloured opaque objects

24. The objects that reflect their colours.

The type of material which appears with the reflected colour

25. A substance contains more than one type of particles / A type of substance in which their components can be separated easily 25. **Mixture**

26. Substance made only of one type of identical particles 26. **Pure Substance**

27. A mixture in which a solute dissolves in a solvent / it consists of a solute and solvent 27. **Solution**

28. Phenomenon in which organisms simulate the colour of the environment. 28. **camouflage**

29. the natural area that includes living organisms (and) non-living things

what is meant by  
29. **Ecosystem**

30. the worm which infects man with elephantiasis.

30. **Filaria**

31. An instrument that consists of many great coils that turn between the two poles of a huge magnet.

31. **the huge dynamo**

32. A structure made of glass used to separate the white light into seven spectrum colours.

32. **Glass Prism**

33. It is a device changes the electric energy into magnetic energy. 33. **Electromagnet**

A huge device used in factories to lift the heavy iron blocks



٣) write the scientific term.

موضوع الدرس:

34 the organism that feeds on decomposing moist wet bread ~~dead~~ dead organisms **34. Saprophyte**

35 A set used to separate oil from water **35. Separating funnel**

36 The main source of light on the Earth's surface. **36. the sun**

37 The relationship between a lion and a deer. **37. Predation**

38 A method used to separate magnetic substances (from) any solid mixture **38. magnetic attraction**

39 The bouncing of light when it falls on a smooth and shiny surface **39. Regular reflection**

40 Process used to separate the solid materials that are insoluble in water **40. filtration process**

41 A balance among the components of ecosystem. **41. Environmental balance**

42 Plants which devour tiny insects **42. Insectivorous**

43 A phenomenon where living organisms can change its colour to hide from its enemies. **43. Camouflage Define**

44 A method that is used to separate iron filings from sand **44. magnetic attraction**

45 The material in which the Solute (disappears) dissolves **45. Solvent**

46 It is the process by which a solute dissolves in a solvent leading to the disappearance of solute **46. Solubility process**

47 It is a mixture in which the solute breaks down into its most basic particles that spread throughout the solvent **47. Solution**



موضع الدرس: تاريخ  
3) write the Scientific Term

48 - the harmed organism (in) parasitism relationship. 47 - the host

49 - A mixture of gases such as oxygen, nitrogen, carbon dioxide and water Vapour. 48 - Atmospheric air

50 - A device which is used to measure electric current intensity. 49 - ammeter

51 - the magnetic pole which is attracted to the north (pole) of another magnet 50 - South pole

## ④ Put (✓) or (✗) and correct the wrong ones:

1 light is a form of energy ( ) (✓)

2 A rainbow is formed when the sun separates the moonlight ( ) (✗) ... when the drops of rain water separate the sunlight.

3 Light transmits in straight lines ( ) (✓)

4 Transparent objects have the same colour of the light that doesn't travel through ( ) (✗) ... that travel through

5 Opaque objects have the same colour of the light which the object reflects ( ) (✓)

6 Cyan, magenta and yellow are the primary colours ( ) (✗) ... the secondary colours.

7 - Mixing red, green and blue colours produces the white colour. ( ) (✓)

8 A Aluminium gets attracted to the magnet ( ) (✗) Iron gets...



## ٤) Put (✓) or (✗)

موضوع الدرس:

٩- An electric current can be generated by using a magnet ( ) ✓

١٠ Magnetism is always related to electricity. ( ) ✓

١١ An electromagnet is formed when an electric current passes through a compass ( ) ✗ ... through a coil winding(around) a wrought iron bar.

١٢ The formed image through narrow holes (pinholes) is inverted ( ) ✓

١٣ The formation of shadow indicates that light travels in curved lines ( ) ✗ ... in straight lines

١٤ The moon seems luminous as it reflects the sunlight ( ) ✓

١٥ When the white light strikes a red rose, the rose reflects the white colour reflects the red colour only. ( ) ✗

١٦ An object seems white as it reflects all light colours ( ) ✓

١٧ If you look at a yellow banana through a green glass sheet, it seems black ( ) ✓

١٨ Blue, green and red lights are primary coloured lights ( ) ✓

١٩ yellow, magenta and cyan are primary coloured lights ( ) ✗ .... are secondary coloured lights.



20. The natural magnet is one of the iron ores which is known (as) magnetite (✓)

21. A magnet attracts all materials (✗) ... the magnetic materials only.

22. Like magnetic poles repel each other, but dislike magnetic poles attract (each) other (✓)

23. The magnetic field is the space surrounding the magnet, where the magnetic force appears (✓)

24. The electromagnet consists of an iron bar and a coil only (✗) .... and a battery

25. The deflection of the ammeter's pointer increases by increasing the motion of the coil (✓)

26. Vegetable salad is considered a mixture (✓)

27. Separating funnel is used in separating immiscible liquid mixtures (✓)

28. Solubility, filtration and evaporation are ways of separating mixtures (✓)

29. Filtration is used to separate a mixture that has a soluble solid material (✗) ... that has an insoluble

30. We can use evaporation process to separate crushed coffee from water (✗) ... filtration process.



التاريخ: put (✓) or (✗)

31. The components of mixtures can be separated ( ) (✓)

32. Solubility speed decreases by shaking and rising the temperature ( ) (✗) .. increases ...

33. The solubility speed of solids increases by grinding ( ) (✓)

34. Increasing the amount of the Solvent decreases (the) speed of solubility ( ) (✗) ... increases ...

35. Fungi feeding on the dead organisms bodies are called (saprophytes) ( ) (✓)

36. Among the different types of fungi, mushroom is distinguished by its ability to make its food ( ) (✗) ... by decomposing food remains or bodies of dead organisms

37. Spiders use their woven nets for catching insects ( ) (✓)

38. Symbiosis includes three types which are mutualism, commensalism and predation ( ) (✗) ..... and parasitism

39. Electromagnets are found in electric bells and mixers ( ) (✓)

40. predation is important to keep balance (of) the ecosystem ( ) (✓)

41. The direction of freely moving magnet is north-south direction ( ) (✓)



٥ موضع الدرس : التاريخ  
 If you have a piece of iron and a bar of magnet, How can you differentiate between them (by using paper clips) ?

Put the paper clips near both of them, the paper clips are attracted to the magnet **but are not attracted** to the piece of iron .

٦ What are the factors which affect on ... ?

1. Magnetic force of the electromagnet.	① Number of coil turns We can increase the magnetic force of the electromagnet by increasing	② Number of batteries
2. Refraction of light		speed of light
3. The image formed by using narrow hole is inverted		travelling of light in straight lines
4. Increase the amount of electricity produced by dynamo	by ① using a strong magnet	② Increasing the number of turns (in) the moving coils

٧ What is the effect of saprophytes (saprophytism)

on the environmental balance ?

Saprophytic organisms help the environment in :

- ① Getting rid of the bodies of dead organisms by decomposing them.
- ② Recycling the chemical elements found in the bodies of dead organisms (as carbon, nitrogen and phosphorus) to the environment to make other living organisms benefit from them.



التاريخ \_\_\_\_\_ موضوع الدرس \_\_\_\_\_

8 Choose the factor that causes the increase in the solubility process in each of the following cases:

Quantity of Solvent (1)	Temperature (2)	Kind of Solute (3)
-------------------------	-----------------	--------------------

1- Adding 500 ml of water instead of 100 ml

water to some sugar.

2 Dissolving sodium chloride instead of sodium carbonate in water.

3 Heating a salt solution instead of leaving it in the air.

Quantity of (1) Solvent	(3) Kind of Solute	(2) Temperature
-------------------------	--------------------	-----------------

9 Which of the following processes takes place faster than the other and why?

(1) Dissolving an amount of salt in 100 mL of water

Or dissolving the same amount of salt in 300 mL of water

the answer:

Dissolving salt in 300 mL of water is **faster than** that in 100 mL of water

**Because:** The increasing in the amount of Solvent

decreases the solubility time

(2) Grinding of Solids before adding them to a liquid to dissolve

Or breaking them down into small pieces.

the answer:

Dissolving of **grinded** solids before adding them to a liquid is faster (than) breaking them down into small pieces.

**Because:** grinding the solid materials increases the solubility speed



21

9

(3) Evaporation of an amount of sea water by leaving it in a beaker in sunlight for several days or heating the same amount on the burner.

The answer:

Heating on the burner is faster than that evaporation of sea water in sunlight.

Because:

the burner is hotter than the sunlight

٩ (3) Dissolving of Sugar grains or sugar cubes in water

The answer:

Dissolving of Sugar grains is faster than sugar cubes in Water.

Because: Grinding of solid materials increases the solubility speed

10) Compare between:

Points of comparison	1 Magnetic materials	Non-magnetic materials
Definition	they are the materials which (are) attracted to the magnet	they are the materials which are <u>not</u> attracted to the magnet
Examples	cobalt - nickel Iron - Steel	copper - aluminium Wood - Chalk - Paper - glass
Points of comparison	Primary coloured lights	Secondary coloured lights
Definition	They are coloured lights which <u>impossible to be produced</u>	they are coloured lights <u>that are produced</u> by mixing <u>two</u> of the Primary coloured lights
Examples	Red, green and blue	Yellow, magenta and cyan



11

What is the function (importance) (use) of

1. Separating funnel

Separates immiscible liquid mixtures.  
Whose components don't mix together  
(as water-oil mixture)

2. A butterfly

stands (on) a tree

With the similar colours.

To hide when attacked by enemies.

3. Compass

It is used to identify the main four  
geographical directions.

4. The electromagnet:

It converts the electric energy into  
magnetic energy.

5. Glass prism

It separates white light into seven  
spectrum colours.

6. Decomposers

- Getting rid of the bodies of dead organisms  
by decomposing them

12 What happens in the following?

1. Put paper clips away from magnetic field of a magnet?

The paper clips are not attracted to the magnet.

2. Red light strikes a green apple.

The apple seems black.

3. Mixing red light colour with blue light colour.

A magenta light colour is formed.

4. Cutting down of trees.

A disturbance in the environmental balance  
will take place.



التاريخ: 12 موضع الدرس: what happens...

5 Introducing rabbits into an island with much food and no natural enemies.

- Predators disappear from an environment including some rabbits. (There are no predators)

- The number of <sup>preys</sup> rabbits will increase, so the food resources become insufficient (not enough) for rabbits that leads to competition between them, so rabbits will die.

6 Saprophytes (as bacteria) disappear from the Earth planet.

- The Earth's surface will be covered with the bodies of dead organisms.

- Chemical elements found in the bodies of dead organisms will not be recycled to environment.

7 Herbivorous (as rabbits) decrease in the environment

- A competition appears among the predators that feed on herbivorous, so the number of predators will decrease.

8 Food producers (as green plants) decrease in the environment.

- Death of all organisms

9. What would happen to the light when it passes through a prism.

- The white light is separated into seven spectrum colours.

10. What would happen to the light when it falls on a smooth bright surface.

- Reflection of light



## 12 What happens ..

11. What would happen to the light when it falls on an opaque black object.

This object absorbs all light colours and doesn't reflect any colour, so it appears black.

12. What would happen to the magnetic force of an electromagnet when the number of coil turns increases.

The magnetic force will be increased.

13. What would happen to light bulb when the dynamo touches the bicycle tire.

The dynamo produces electricity so the light bulb light up.

14. A bar magnet is hanged to move freely.

It takes a fixed direction which is north-south direction.

15. You mix the seven spectrum colours together.

A white light is formed.

16. Putting the north pole of a magnet near the south pole of another magnet.

The two poles attract each other.

17. Putting salt solution on the burner.

Water evaporates, leaving the salt in the cup.

18. You look at a spoon placed in glass contains water.

The spoon seems broken due to the refraction of light.

19. Moving copper wire between two poles of a magnet.

The kinetic energy changes into electric energy.  
(or mechanical)



12

## What happens...

20. Passing of an electric current in a wire wrapped around a rod of soft iron.

The iron rod becomes a temporary magnet called "the electromagnet".

21. You look at a picture through a glass sheet.

I can see the picture clearly.

22. Increases the number of turns in the moving coils in dynamo. (using a strong magnet inside)

It causes increasing the produced amount of electricity

inside a dynamo

23. Cutting the electric current from electromagnet

The electromagnet loses its magnetic force.

24. Man interference by polluting environment

A disturbance in the environmental balance will take place

25. Grinding Salt with pepper.

A mixture of salt - pepper is formed.

26. A chameleon is attacked by an enemy.

Changes its colour to simulate the colour of the surrounding environment to hide from its enemies

27. You place your hand between a light source and a wall.

A clean shadow of my hand is formed.



13

What is meant by...

Define...

**mimicry:** A phenomenon in which the harmless living organisms imitate other harmful or poisonous living organisms to frighten their enemies and escape from them.

**light reflection:** It is the bouncing (returning back) of light rays when light falls on reflecting surface

14- What is the method that is used to form a mixture from the following ... ?

1. Salt and pepper: (Grinding)

2. Sugar and water: (Stirring or shaking)

15- How can the following mixtures be separated?

chalk, mud, 1 Sand, Powder Solution: (Filtration process)

2. Paperclips and flour: (magnetic attraction)

3. Water and oil: (Separating funnel)

4. Sugar Solution: (Evaporation process)

16- Mention the Methods (ways) to separate mixtures and when each way can be used.

Methods of separation of mixtures are:

① **Magnetic attraction:** it is used to separate magnetic substances as iron from other solid substances in a solid-solid mixtures



- ② **Evaporation process**: It is used to separate solids that dissolve in liquids in a solid-liquid mixtures.
- ③ **Filtration process**: It is used to separate solids that insoluble in liquids in a solid-liquid mixtures.
- ④ **Separating funnel**: It is used to separate liquid mixtures whose components don't mix together such as water-oil mixture.

17

State the solvent and solute in each of.

Solution	solute	solvent
1. Sugary Solution	Sugar	water
2. Salty Solution	salt	water

18

complete the following concept map

**Salty solution**

can be Separated by

(1) **process**

to give

(2) ....

(3) ....

1. Evaporation

2. salt

3. water

19 mention 3 mixtures:

1 fruit salad (solid-solid mixture)

2 oil and water (liquid-liquid mixture)

3 - Sand and water (solid-liquid mixture)



20. Mention the name of the used tool:

1. Separation of a mixture of oil and water - Separating funnel

2. Lighten the bicycle bulb - The small dynamo

3. Determine north and South direction - The compass.

4. Converting of electrical energy to magnetic energy - Electromagnet

5. Split white light into Seven colours. - Glass prism

21. Write the name of the parasite that causes the following diseases:

1. Elephantiasis: filaria worm.

2. Malaria: Mosquitoes

3. Plague: Fleas

4. Bilharziasis: Bilharzia worm.

5. Anaemia: Ascaris worm.

### Classify

22. Identify the type of parasitism of the following organisms using one of these choices:

(external or internal parasite)

1. Bilharzia (internal)

2. Jawless lamprey (external)

3. Mosquito: (external)

4. Ascaris worms: (internal)



23. Name three types of mixtures in a table according to their components

Solid-Solid mixture	Solid-Liquid mixture	Liquid-Liquid mixture
- Sand and iron filings	salty solution	- oil and water
- Sand and salt	sugary solution	- vinegar and water
- Iron filings and flour	Mineral water	

24. How does man benefit from saprophytic organisms in the industry?

Saprophytic organisms can be used in:

- (a) **Food industry**: as in making cheese, bread, yoghurt and vinegar.
- (b) **Drugs industry**: as in manufacturing of some drugs as antibiotics.
- (c) **Leather tanning industry**.

25. Mention the kind of food relationship between ...

① Lion and deer (cat and rat) (fox and rabbit) (Drosera and insects)	predation
② Nodular bacteria and bean plant (Leguminous)	Mutualism
③ Sponge and tiny aquatic living organisms	commensalism
④ Bread mold fungus and moist bread fungi and dead organisms	Saprophytism



25. Mention the kind of food relationship between ...

(5) Jawless lamprey and fish  
Lice and man  
mosquitoes and man

External parasitism

6. Ascaris Worm and man  
Bilharzia worms and man

Internal

parasitism

26. Choose one of the following terms to complete the following sentences :

(Snake - wheat - sheep - rat - predation)

1. The producer is ...

2. The predator is ...

3. The herbivorous are ... and ...

4. The relationship between a snake and a rat is known as ...

The answer: 1. wheat 2. snake 3. sheep - rat  
4. predation.

27. Cross the odd word out:

1. Predation - Symbiosis - photosynthesis - saprophytes  
(photosynthesis):

Types of food relationships

2. Air - tap water - fruit salad - Baking soda.  
(Baking soda)

mixtures



27- cross the odd word out

③ Iron - Glass - Plastic - sand

(Iron)

non-magnetic materials

④ Tissue paper - Air - Glass

(Tissue paper)

transparent materials

⑤ salty solution - Sugary solution - Sand in water.

(Sand in water) (ways to separate mixtures) by evaporation process

⑥ Grinding - stirring - filtration

(filtration) methods that are used to form a mixture

⑦ Red - Blue - Magenta

(Magenta) primary coloured lights

28- Correct the underlined words

1. Newton is the scientist that discovered how to make the dynamo

1. Faraday

2. Mushroom is distinguished by its ability to make its food.

2. Green plants

3. formation of images by using narrow holes are minimized and upright

3- inverted

4. Insectivorous plants cannot make fats

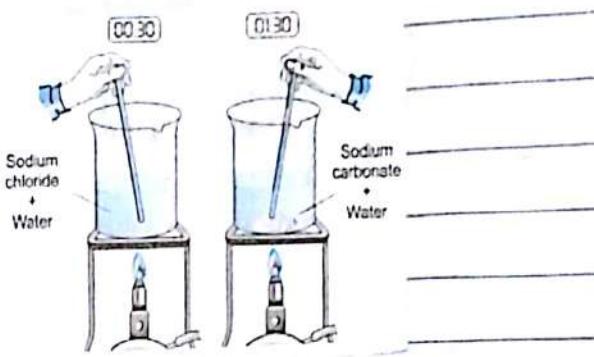
4. proteins



From the opposite figure :

1. What is your observation ?

2. The factors that affect solubility in this figure are



1) The time needed to dissolve Sodium chloride differs from that needed to dissolve sodium carbonate.

2) 1- The kind of the solute

2- The temperature

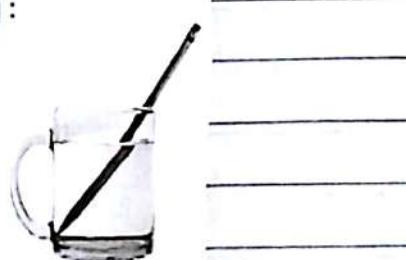
Examine the opposite figure, then answer the following :

1. The pencil seems ..... at the water surface.

2. This phenomenon results from ..... of light.

3. Air and water are considered ..... media.

4. The light speed is faster in ..... than in .....



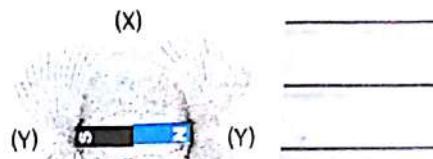
1- broken 2- refraction 3- different transparent  
4- air - water.

Examine the diagram, then complete  
the missing words :

1. The diagram shows the .....

2. The (N) and (S) letters are the .....

3. The effect of the magnet is strongest  
at area ..... and weakest at area .....

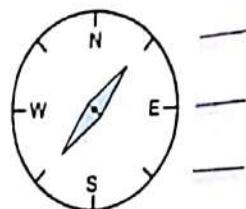


1- magnetic field 2- 2 Poles 3- Y - X



[A] Examine the figure, then answer the following :

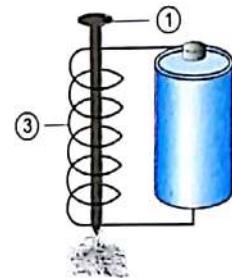
1. The tool is called .....
2. Its basic idea depends on using a ..... needle.
3. This needle is light and can ..... freely.
4. This tool is used to identify the .....



1- The compass 2- magnetic 3- Spin  
4- the main four geographical directions.

Look at the figure, then answer :

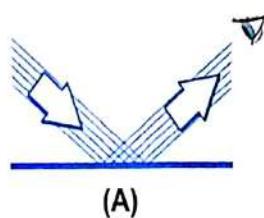
1. The figure represents .....
2. ① Points to .....
- ② Points to .....
- ③ Points to .....



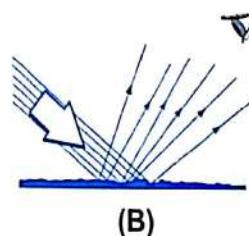
1. The electromagnet.

2. ① Wrought iron nail ② Battery ③ Copper wire

[B] The opposite figure represents light reflection complete the following on the figure :



(A)



(B)

1. Surface (A) represents .....
2. Surface (B) represents .....
3. Type of reflection in (A) is ....., while that in (B) is .....

1- smooth surface 2- rough surface  
3- regular reflection irregular reflection



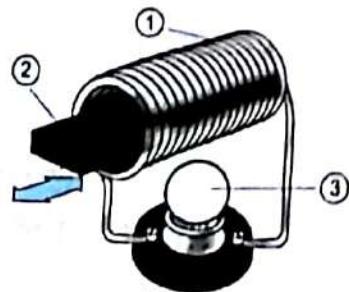
[D] Study the following figure, then label it :

1

.....

.....

.....



2 The figure represents ....

3 the apparatus is used to change ....  
energy into .... energy

1 ① coil ② magnet ③ Electric Lamp

2 the dynamo

3 Kinetic - electric

my best wishes

علوم مع عادة صلبة